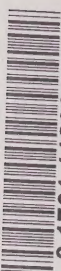


CA20N EP1

-76503



3 1761 11892268 1

Government  
Publications

# Electricity Costing and Pricing Study

---

Volume III


---

## Report on Inflation Accounting



October, 1976





Digitized by the Internet Archive  
in 2023 with funding from  
University of Toronto

<https://archive.org/details/31761118922681>



## Table of Contents

	Page No
<b>I. INTRODUCTION</b>	1
<b>II. PURPOSE AND SCOPE OF REPORT</b>	2
<b>III. SUMMARY AND RECOMMENDATIONS</b>	3
A. Summary of Report	3
B. Summary of Recommendations	3
<b>IV. CURRENT STATE OF THE ART</b>	4
A. Background	4
B. Canada	4
C. United States	4
1. Financial Accounting Standards Board	4
2. Securities and Exchange Commission	5
D. United Kingdom	5
E. Status of Inflation Accounting in Other Countries	6
1. Latin America	6
2. Australia	6
3. New Zealand	6
4. Germany	6
5. Mexico	6
6. South Africa	6
F. Summary of Current Status	6
<b>V. ASSESSMENT OF MODELS FOR INFLATION ACCOUNTING</b>	8
A. Model for General-Price-Level Accounting	8
1. Statements	8
2. Analysis	9
3. Techniques and Assumptions	12
4. Assessment of General-Price-Level Accounting	13
B. Model for Current-Value Accounting	15
1. Introduction	15
2. Statements	15
3. Analysis	15
4. Technique and Assumptions	16
5. Assessment of Current-Value Accounting	16

<b>VI.</b>	<b>CONCLUSIONS AND RECOMMENDATIONS</b>	19
A.	Internal Requirements	19
B.	External Requirements	19
C.	Response to CICA	19
<b>APPENDIX I:</b>	<b>CICA Exposure Draft on 'Accounting for Changes in the General Purchasing Power of Money</b>	20
<b>APPENDIX II:</b>	<b>General Price-Level Adjustment Statements Prepared on Basis Recommended by CICA</b>	58
<b>APPENDIX III:</b>	<b>General Price-Level Adjusted Statements Prepared on Basis of Amortizing the General Price-Level Gain</b>	61
<b>APPENDIX IV:</b>	<b>Restatement of Fixed Assets</b>	64
<b>APPENDIX V:</b>	<b>Debt/Equity Ratios</b>	65
<b>APPENDIX VI:</b>	<b>Current Value Statements</b>	66

## I. INTRODUCTION

Accounting should provide periodic measurement of corporate progress, and financial statements that assist users in making decisions. It is a means of communicating relevant information to interested parties to help them assess performance of any business activity, and examining such factors as return, risk, liquidity, and future growth. The traditional accounting-model is based on reporting transactions in terms of dollars at the date of those transactions. As a result of this model, the users of historical financial statements are presented with a record of a mixture of transactions occurring at different times, added together and portrayed as if their economic significance could be evaluated in terms of the present-day value of money.

The balance sheet is criticized on the grounds that values in fixed assets in particular do not represent the real value of those assets employed in a business. Thus investors and lenders have a hard time determining the values supporting investments and the real return on investments.

The income statement is considered to be weak, particularly for depreciation charges and cost of goods sold. Similar assets acquired at different times for varying prices will generate unlike charges to depreciation expense, even though they make similar contributions to the business. Inventories bought and charged to expense at transaction cost may have to be replaced at inflated prices to maintain the operating-capability of the company. If higher replacement costs for fixed assets and inventories are recognized by management and reflected in higher selling-prices, the effect under the historical cost-accounting model is to show a higher net income because of sales revenue based on current values and a significant portion of expenses based on historical costs. A portion of such net income is illusory in an economic sense, since it is needed to maintain the operating-capability of the company.

A further problem is that operating-results and financial positions cannot be reasonably compared on a year-to-year basis within one company, and comparisons between companies may be invalid. Some companies have attempted to overcome the deficiencies by introducing additional reporting-methods. The techniques to overcome the weakness of financial statements from changes in money value are generally called inflation accounting, and are the subject of this report. The ability to cope with deflation was also considered in carrying out the study, but deflation is not specifically addressed in the report.



## II. PURPOSE AND SCOPE OF REPORT

The objective of the study was to review the different models for inflation accounting and assess their application to the specific and particular needs of Ontario Hydro, a public Crown corporation. With a general indication of the effect different accounting models would have on Ontario Hydro, the Corporation would be in a position to determine whether policy should be changed to provide financial data in another form. In particular the report analyses the feasibility of inflation accounting as it relates to the following functions:

1. financial planning;
2. internal reporting for decision-making, control, and appraisal of performance;
3. external reporting for investors and to comply with legal requirements; and
4. revenue requirements.

The study team investigated feasibility of the alternative techniques available for presenting financial statements, and applied some of these techniques to the financial data of Ontario Hydro for 1974. The approach they took was to research the available literature in this field and attend seminars and workshops with corporate executives, academics, and members of the accounting-profession. This led them to choose various methods to test using Ontario Hydro data. They did not strive for great accuracy in details. To have done so would have added needlessly to the effort required and to the cost of the study.

### III. SUMMARY AND RECOMMENDATIONS

#### A. SUMMARY OF REPORT

For some years, academics, accountants, and businessmen have been wrestling with the problems of inflation accounting. In the search for solutions to the apparent deficiencies of traditional historical-cost accounting, two main alternatives have emerged. One is a purchasing-power (general-price-level accounting) which involves applying a single index and is simply an extension of historical-cost accounting; the other is centred on current-value accounting, of which there are several techniques.

Initial efforts were directed mainly towards general-price-level accounting, and accounting-bodies such as the Institute of Chartered Accountants in England and Wales, the Financial Accounting Standards Board (FASB) in the U.S. and the Canadian Institute of Chartered Accountants (CICA) came out with exposure drafts proposing its use, suggesting experimentation, and asking for comments. Very recently, there has been a marked shift away from this approach, and its use has been essentially left on a voluntary basis.

The primary focus now is on current-value accounting, and different countries are in different stages of development. The proposals of a government-appointed Inflation Accounting Committee in the United Kingdom have been accepted (Sandilands Committee Report) and a steering-group is working on implementing current-value accounting and determining whether general price-level accounting can be included. In a status report dated 4 June 1976, FASB in the U.S. decided to defer further consideration of a statement on general price-level reporting at this time, because it was felt that the need for this type of information was now not sufficiently demonstrated to justify imposing its implementation upon all preparers of financial statements. Meanwhile, the Securities and Exchange Commission (SEC) in the U.S. has established a requirement for registrants to disclose certain current-value information, which has generally been made effective for financial statements covering fiscal years ending on or after 25 December 1976. In Canada the CICA exposure draft on general-price-level accounting is in limbo, and a discussion paper on current-value accounting has recently been issued for comments.

The study team assessed the usefulness of both general-price-level and current-value accounting in terms of Ontario Hydro's specific needs, both for internal and external purposes. It should be noted that since Ontario Hydro pays neither income taxes nor dividends to shareholders, it lacks many important motives private companies have for changing over.

The following briefly outlines the findings and conclusions relative to the four functions analysed:

1. Inflation is already recognized in the present financial-planning process, since future costs are adjusted for expected rates of inflation. In the financial forecast, overall cash-flow requirements are evaluated, giving consideration to trade-offs between financial soundness, rate increases, availability of capital, and the ongoing capital construction program. Adopting either form of inflation accounting would not benefit this process.
2. Adopting inflation accounting for purposes of internal reporting would not aid the processes decision-making, control, and appraisal of performance as presently carried out in Ontario Hydro.

Spending decisions are based on estimates of future incremental costs, which are not the same as costs restated by a general index or replacement costs. They are based on differences between alternatives, with future estimates of cash flows appropriately discounted, and the primary emphasis is on minimizing costs.

Ontario Hydro's main management reporting-system is based on comparisons of actual and projected data against original forecast data on a compatible basis, and already includes predictions of cost escalation.

Measures of productivity usually involve comparisons of work output against standards and service criteria, and any form of inflation accounting would not improve this process.

3. A portion of the equity financing obtained through rates is used to provide capital facilities to meet future load demand. Applying current-value accounting techniques, the argument that present customers should pay for the cost of facilities they are using in terms of today's dollars should be developed to further support total revenue requirements before review bodies. This can be done without implementing a complete model of current-value accounting and producing the associated periodic statements.
4. For purposes of external reporting, it is considered prudent for Ontario Hydro to provide whatever information is required to maintain its standing in the Canadian and foreign capital markets. This will depend on the type of information investors need to improve their ability to analyse companies, which undoubtedly is headed towards current-value information. In Canada, there are no immediate concerns or requirements to satisfy. In the U.S., as was mentioned above, the SEC now requires registrants to provide certain current-value information. At the present, this requirement does not apply to foreign governments and agencies, but this may very well change in the future.

Since the CICA have asked for comments on their general price-level exposure draft and have now also asked for comments on current-value accounting, it is considered appropriate to make this report available to them as well as other interested parties.

#### B. SUMMARY OF RECOMMENDATIONS

Based on the analysis completed within this review, as outlined in this report and its appendices, it is recommended that:

1. *Ontario Hydro should not adopt inflation-accounting techniques for internal purposes at this time.*
2. *Ontario Hydro should not adopt inflation-accounting techniques for purposes of general external reporting at this time. However, a further study should be carried out to determine the costs and benefits of providing certain replacement-cost information required by the SEC in the U.S., but which is not yet mandatory for foreign governments and agencies.*
3. *Ontario Hydro should make this report available to the CICA and other interested parties.*



## IV. CURRENT STATE OF THE ART

### A. BACKGROUND

In the search for solutions to the apparent deficiencies associated with historical cost accounting, two main alternatives have emerged under the general heading of inflation-accounting techniques:

1. restating historical costs in terms of general or average purchasing power, and
2. some form of current-value accounting.

Restating historical costs in terms of general or average purchasing-power is essentially a mechanical process, by which transactions recorded at historical costs are all expressed in units of purchasing-power, usually at the date of the most recent balance sheet, by applying a single price index.

Current-value accounting describes a family of techniques which attempt to deal with values of assets as opposed to costs. There are four main procedures, which differ in method of valuation. These are:

1. *Replacement Cost.* The present-day cost to replace the capacity of an asset held with an asset of equivalent capacity in present-day technology.
2. *Reproduction Cost.* The present-day cost to produce an asset identical to the one held.
3. *Resale Price.* The net price after selling-expense which could be obtained by selling an asset.
4. *Discounted Future Cash Receipts.* The present value of the future cash flow which can be attributed to an asset.

Inflation-accounting techniques have commanded the urgent attention of the accounting-profession, academics, and business leaders throughout the world. Much effort has been devoted towards the research and development of such techniques. The following four sections outline the state of the art of inflation accounting in different countries.

### B. CANADA

A guideline on *Accounting for the Effects of Changes in the Purchasing-Power of Money* was issued by the Canadian Institute of Chartered Accountants (CICA) in December 1974. This guideline deals exclusively with the technique of general-price-level restatements of historical-cost financial statements, with the ultimate goal of accomplishing the following objectives:

1. To restate the recorded amount of assets and liabilities of the enterprise in terms of current general purchasing-power.
2. To measure the increase or decrease in general purchasing-power which the enterprise has undergone from holding monetary assets and liabilities.
3. To show whether the general purchasing-power of shareholders' investments, as represented by the recorded amount of their equity, has been maintained.
4. To show the rate of return on investment, after taking account of the inflationary or deflationary effect on original cost and profits.

The guideline recommends using a general price index in the restatement of historical financial statements. It recognizes that the use of a general price index only reflects changes in the *general purchasing-power of money*, and does not reflect the effect of specific price changes experienced by a particular enterprise, nor the current value of the enterprise.

In July 1975, an exposure draft on *Accounting for Changes in the General Purchasing-Power of Money* was issued by the Accounting Research Committee of the CICA (Appendix I). The basic recommendations proposed in the exposure draft are similar to the guideline issued earlier, and are intended to provide for uniformity in preparing financial information to reflect the effects of changes in the general price level. The Committee urges enterprises to experiment with the proposed general-price-level restatement techniques, and submit comments on the proposed recommendations and the results of experimentation to the Committee for further consideration, in order to determine whether it should recommend publishing general-price-level information as supplements to the historical-cost financial statements, at least for public companies in the private sector, for fiscal periods beginning on or after 1 January 1977.

Comments were to have been sent to the Committee by 31 December 1975, and to date the CICA has made no statement on the status of general-price-level accounting. There is an awareness, however, that the CICA does not propose to require presenting data restated for changes in the general purchasing-power of money. The findings will be published, and may be implemented by those who find them useful, but on a voluntary basis. Furthermore, a discussion paper has been prepared on current-value accounting, and has recently been issued for comments.

### C. UNITED STATES

#### 1. Financial Accounting Standards Board

The Financial Accounting Standards Board (FASB) issued an exposure draft on *Financial Reporting in Units of General Purchasing Power* on 31 December 1974. This exposure draft is not a new one; in 1969 the Accounting Principles Board (APB) had made similar recommendations in APB Statement No. 3, *Financial Statements Restated for General Price-Level Changes*. In substance the FASB's exposure draft is very similar to the CICA's recommendations. It addresses itself directly to the problems created by the changes in the general purchasing-power of money, while recognizing that such restatements will not portray the true current value of enterprises. It proposes mandatory application for fiscal years beginning on or after 1 January 1976.

In November 1975 the Board announced that it would not issue a final statement on general-purchasing-power accounting in 1975. Consideration was deferred pending further analysis of the results of the field tests which a large number of companies had conducted on the provisions of the exposure draft.

In a status report dated 4 June 1976, the FASB decided to defer further consideration of a statement on financial reporting in units of general purchasing power. The Board has not reached a conclusion about the merits of providing this type of information, but only concluded that preparers and users do not now understand general-purchasing-power information sufficiently well, nor is the need for it now sufficiently well demonstrated, to justify imposing the cost of implementation upon all preparers of financial statements at this time. The SEC requirement for large corporations to provide data on current replacement costs (as outlined in the next section), and further consideration that will necessarily be given to financial measure in units of general purchasing-power in connection with the Board's conceptual-framework project, were given as important reasons for postponing further consideration rather than attempting to reach a final judgement at this time.



## 2. Securities and Exchange Commission

On 21 August 1975, the Securities and Exchange Commission (SEC) issued a proposed amendment to Regulation S-X, "Disclosure of Certain Replacement Cost Data in Notes to Financial Statements". The Commission recognizes that the general rate of inflation does not reflect the effect of specific price changes on a particular company. The effect of specific price changes can be substantially more or less than that indicated by the average or general inflation rate encompassing all price changes in the economy. In the light of the current rate of inflation, the Commission proposes to amend Regulation S-X to require registrants to disclose in the footnotes to financial statements the *current* cost at the end of the reporting-period of replacing inventories and productive capacity as well as the cost of sales and depreciation, and depletion and amortization expenses, computed on the basis of replacement cost during the reporting-period. The Commission believes this data would enable investors to obtain a better understanding of the *current* cost of running the business than they obtain from historical-cost financial statements taken alone, and that they need such an understanding to make informed investment decisions.

On 23 March 1976, the SEC adopted an amendment to Regulation S-X (by establishing Rule 3-17, as outlined in Accounting Series Release No. 190) which calls for disclosing replacement-cost data for registrants whose inventories and gross property, plant, and equipment aggregate more than \$100 million and comprise more than 10 per cent of total assets. They would have to disclose the estimated current replacement cost of inventories and productive capacity at the end of each fiscal year for which a balance sheet is required, and the appropriate amount of cost of sales and depreciation based on replacement cost for the two most recent full fiscal years. Furthermore, registrants would have to disclose the methods used to determine these amounts, and furnish any further information which management is aware of and deems necessary to prevent the information from being misleading. This information may be presented either in a footnote to the financial statements or in a separate section of the financial statements following the notes. In either place, the information may be designated as 'unaudited'.

The SEC has decided to make Rule 3-17 of Regulation S-X effective for financial statements covering fiscal years ending on or after 25 December 1976, except that it is not to apply to the mineral-resource assets of companies engaged in the extractive industries before fiscal years ending on or after 25 December 1977.

The SEC did not and does not view its requirements as competitive with that of the FASB. In fact, in implementing the Commission's rule, some registrants may wish to use data about changes in the general price level as part of the analysis of reasons for changes in replacement costs. Similarly, the SEC does not believe its new requirements prejudice any conclusions which may arise from the FASB's study of the conceptual framework of financial statements. As it noted in its original proposal, the SEC believes that fundamental changes in the basic accounting-model should come about only after careful study by the FASB. It believes that experiment with replacement-cost information of the sort that will result from carrying out this rule will materially assist the FASB in its study, as well as providing meaningful supplemental disclosure to investors in the interim. Finally, the SEC does not believe that adopting this rule will have

any adverse effect on its own broad study of financial disclosure.

## D. UNITED KINGDOM

In 1973, a Working Guide to the Accounting Procedures, *Accounting for Inflation*, was issued by the Institute of Chartered Accountants in England and Wales. This was followed by the publication of the Provisional Statement of Standard Accounting Practice No. 7, *Accounting for Changes in the Purchasing Power of Money* in May 1974, with no binding obligation for companies to disclose and explain departures in their annual accounts and no obligation for auditors to mention such departures in their reports. The Provisional Statement deals only with general-price-level restatements, and is similar to the U.S. and Canadian exposure drafts. In September 1975, the government-appointed Inflation Accounting Committee chaired by F.E.P. Sandilands issued a long report on inflation accounting (The Sandilands Committee Report). This report has basically rejected both historical-cost accounting and the approach of general-price-level restatement as proposed in the Provisional Statement No. 7, on the grounds that applying a general price index would not correct the deficiencies of historical-cost accounting and the restated assets value might give a misleading impression to readers of financial statements. The Committee holds that inflation affects companies differently according to the goods and services they buy, and a company's accounts should show the effects of inflation on that particular company's operation. Therefore, the Committee argues that the most logical approach to inflation accounting is a system based on *value* accounting, which shows the specific effect of inflation on individual companies. It proposes a system closely resembling the Dutch system of replacement-value accounting, to be known as current-cost accounting. The principal features of this are as follows:

1. Financial statements would continue, as at present, to be stated in terms of monetary units, thus eliminating the need to account for gains or losses on monetary assets or liabilities.
2. The balance sheet should show company assets at their "value to the business" at the balance-sheet date.
3. Profits should consist of operating-gains and exclude all holding-gains. Extraordinary gains could be shown as profits, but should be distinguished from operating-gains.
4. This system should replace historical cost as the basis for published financial statements but net book value of assets and depreciation on the historical-cost basis should be shown in statement notes.

The Committee views "value to the business" of an asset as the loss the company would suffer if it were deprived of the asset. Most often this would mean stating an asset at its replacement cost, with any holding-gains being shown in a revaluation reserve.

The proposed system calls for two adjustments in the income statement:

1. Depreciation should be a proportion of the "value to the business" of the balance-sheet assets, rather than a proportion of their historical cost.
2. Appreciation in inventory values should be removed from the income statement and credited to a reserve. This would be achieved by a "cost of sales" adjustment, which in effect charged out inventory at its value to the business at the time it was consumed, not at its historical cost.



The British Government accepted the Sandilands proposals, and an Inflation Accounting Steering Group chaired by Douglas Morpeth has been formed to carry them through. This group is charged with resolving the problems of setting up current-cost accounting and determining whether general-price-level accounting can be included. The group's most pressing commitment is to produce an exposure draft on inflation accounting within twelve months. If it meets this deadline, a short period of discussion will follow, and publication of a new standard is expected by the fall of 1977.

## E. STATUS OF INFLATION ACCOUNTING IN OTHER COUNTRIES

The following provides an outline of the state of the art of inflation accounting and/or lists publications on the subject in various other countries, and is not meant to be exhaustive.

### 1. Latin America

In Latin American countries where inflation has been endemic (notably Brazil, Chile, and Uruguay, where consumer price indices have risen 947 per cent, 498 per cent and 2,221 per cent respectively from 1963 to 1970, compared to 26 per cent for Canada in this same period), 'monetary correction' must by now be synonymous with 'inflation accounting' and has become the norm. But inflation accounting is in fact only one part of a wider program adopted in varying degrees in these countries. The attitude behind the program is simple and pessimistic: do what we may, we cannot defeat inflation, so we may as well try to live comfortably with it.

The system came into being in Brazil in 1964, as part of a national strategy for easing the ill effects of inflation (for instance, by indexing wages and savings accounts). Thus it was devised by technocrats, and not directly by accountants. It is not a rounded system for "stabilizing" the whole ledger, but a series of AD HOC measures, dealing with:

1. *Fixed Assets*. These must be revalued yearly, with the help of a general index.
2. *Depreciation Charges*. These are revised promptly (for tax and general purposes) with monthly index factors.
3. *Working Capital*. Firms can maintain the purchasing-power of their working capital (inventories and net money assets) by charging a yearly provision against profits. Its size is found by applying a general index factor to the working capital at the outset of the year.

The revised figures are not treated as supplementary statements, but become an integral part of a company's bookkeeping and its published reports.

### 2. Australia

General-price-level restatements and current-value accounting are under consideration in Australia, as the following publications show:

1. Preliminary Exposure Draft, *A Method of Accounting for Changes in the Purchasing Power of Money*, Australian Accounting Research Foundation (issued December 1974).
2. Preliminary Exposure Draft, *A Method of Current Value Accounting*, Australian Accounting Research Foundation (issued June 1975).

3. Evaluative Paper, *A Comparison of Accounting Measurement Systems*, Australian Accounting Research Foundation (issued September 1975).

A recent committee of inquiry into inflation and taxation, appointed by the Australian government, observed that "The taxing, accounting and pricing policies which have traditionally been adopted in relation to business enterprises, when combined with the rates of inflation which have recently been experienced, are incompatible with the continued existence of the private sector". The Committee recommended using replacement costs in inventory valuation and in depreciation for taxation purposes. The Australian Government has accepted the recommendation and agreed to implementation beginning in July 1976.

### 3. New Zealand

Exposure Draft, *Statement of Standard Accounting Practice No. 10: Accounting for Changes in the Purchasing Power of Money* (issued March 1975).

### 4. Germany

Draft Recommendation, *Accounting for the Purpose of Maintaining the 'Substantialistic Value' of an Enterprise* (issued December 1974).

### 5. Mexico

Exposure Draft, *Proposal for Restatement of Financial Statements for Changes in the General Price-Level* (issued September 1975).

### 6. South Africa

Discussion Paper, *Accounting for Inflation and Other Changes in Price-Level* (issued January 1975).

## F. SUMMARY OF CURRENT STATUS

At present there seems to be no single procedure generally accepted by those doing research in the field of accounting for inflation. First efforts appear to have been oriented towards general-price-level restatements. Until very recently, the accounting-profession in Canada also supported this approach. This support may have been based on the fact that the technique is a mechanical process based on traditional accounting which can be applied with uniformity, rather than the conviction that it provides the best method of accounting for changing prices. Because of the process, it is easy to audit and express an opinion on price-level-adjusted financial statements. This method was also supported by those corporations which saw the procedure as possibly becoming a firm recommendation of the CICA. They might have preferred a form of current-value accounting; but they needed some immediate change, and wanted the backing of the CICA to support their new method.

Much experiment and research is going on, and organizations appear to be striving for the method which best supports their specific goals. However, there has been a general shift in emphasis, and academics and those accountants searching for the most meaningful data are concentrating on current-value accounting. This search is complicated by their inability to clearly define the needs of users of financial statements. Research by Ontario Hydro indicates that the underlying reasons for proposed changes in financial reporting appear to be a 'taxation lobby', explanation of high reported incomes, and justification of dividend policies. Those companies presenting financial data with adjustments for inflation make much of the very high effect-



tive taxation rate under inflation accounting. The common result of inflation-accounting techniques is to increase the cost of goods sold and operating expenses, when these are restated in terms of general purchasing-power or current value. When the amount of taxation computed under current tax laws, which do not recognize the effects of inflation, is compared with the recalculated net income, the usual result is a much higher effective rate of taxation compared to that under historical-cost accounting. These companies seem to recognize that the total taxation requirement of government will not change if inflation accounting is accepted for tax purposes, but they believe that their relative share will decrease. There is insufficient evidence to support this belief.

Current record profit levels reported under traditional accounting-methods during inflation have given rise to charges of "corporate rip-off" by politicians, labour unions, and members of the general public. Profit created because of rising prices is illusory, because the resources used up in the generation of revenues have to be replaced at higher cost. Inflation accounting would report a more realistic profit level, and establish that current revenues were required to maintain the capacity of the firm to continue doing business at its current level during a period of rising prices.

By these same techniques management can establish to shareholders that funds traditionally deemed available for dividends are required for continued running of the business. If governments continue to tax on an historical basis, the companies are in effect paying taxes on illusory profits. This will erode the companies' real equity, and the owners will have to make further equity contributions to maintain the productive capacity.

The impetus of inflation accounting has been essentially directed towards companies in the private sector and their needs. Since Ontario Hydro pays neither income taxes nor dividends to shareholders, it lacks many important motives private companies have for changing over.

The study team carried out a brief survey of the main electrical utilities in Canada, to determine their stand on inflation accounting. Generally, they have not studied it in any depth, either because the need for it has not been sufficiently demonstrated so far, or because they do not consider it a real issue in their situation, where the customers and owners are in effect the same people. Calgary Power, a regulated company in the private sector, have reviewed the CICA exposure draft and expressed concern with the recommended treatment of annual general-price-level gains on monetary liabilities, feeling those should be amortized. Because of their particular circumstances, they are not encouraging the use of inflation-accounting techniques. The various utilities, however, are prepared to provide whatever supplementary data is required to meet their financing-needs.

## V. ASSESSMENT OF MODELS FOR INFLATION ACCOUNTING

In this section, each of the two main alternative models for inflation accounting is treated separately and assessed in terms of the functions set out in Section II. A brief integrated summary is provided in Section VI.

### A. MODEL FOR GENERAL-PRICE-LEVEL ACCOUNTING

#### 1. Statements

Under conventional accounting, transactions are reported in terms of the money amount involved. If the general price level rises, an asset whose price has changed in accordance with the change in price level will be recorded at a higher amount than an identical asset purchased earlier when the price level was lower. Likewise, a transaction consummated recently will be recorded at a higher amount than an identical transaction consummated earlier. In general, distortions will be introduced into the books of account.

Under the model for general-price-level accounting all assets, liabilities, expenses, and revenues are restated into units of common purchasing-power, rather than presented in the financial statements at dollar values whose purchasing-power differed as transactions were consummated at different times. General-price-level accounting does not represent an entirely different accounting-model, as would current-value accounting. It is still based on historical cost, merely adopting units of purchasing-power instead of the dollar (which commands different purchasing-power at different times) as the yardstick. Therefore, one must keep in mind that the restated amounts in the financial statements do not represent the *current value* of the related assets. However, general-price-level restatement is more realistic than the historical-cost convention, since the purchasing-power of the dollar does change over time.

Two sets of general-price-level adjusted statements were prepared, and are included as Appendices II and III.

Statements 1-3 (Appendix II) present the Statement of Financial Position and Statement of Operations in both historical dollars and units of general purchasing-power for 1974 and 1973, on the principles recommended by the CICA exposure draft, the relevant ones being as follows:

1. The calculation of general-price-level information should be based on a complete restatement of the historical-cost financial statements, and not on a partial or selected-item basis.
2. The index to be used in preparing general-price-level statements is the GNE Implicit Price Index.
3. General-price-level information should be presented in terms of units of general purchasing-power as at the end of the current accounting-period.
4. Monetary and non-monetary items must be distinguished in preparing general-price-level statements. Since monetary items in the current historical-cost balance sheet are stated in units of current general purchasing-power, they should be included at the same amounts in current general-price-level statements. Non-monetary items should be restated to units of current purchasing-power.
5. General-price-level gains and losses from holding monetary liabilities and assets should be included in the determination of current net income in the general-price-level income statement.

The entire CICA exposure draft is reproduced in Appendix I.

One of the most controversial of the CICA recommendations affecting firms such as Ontario Hydro which have large amounts of debt outstanding is that the general-price-level gains and losses from holding monetary liabilities and assets should be recognized and included in the determination of current net income in the general-price-level income statement. The following are relevant excerpts from the exposure draft which support recognizing the general-price-level gains and losses.

*Since units of general purchasing power are expressed as at the end of the current accounting period, monetary items held at that date will already be stated in the same units of general purchasing power in both the historical cost financial statements and the general price-level statements - no re-statement is necessary. For example, a bank loan incurred at an earlier date and unpaid at the end of the current accounting period is still payable at the original dollar amount even though these dollars may now have a general purchasing power different from that at the date the debt was incurred; an account receivable arising at an earlier date and unpaid at the end of the current accounting period is still collectible at the original dollar amount even though these dollars may now have a general purchasing power different from that at the date the receivable arose.*

*Holders of monetary items gain or lose general purchasing power by reason of changes in the general level of prices. In times of inflation, the purchasing power of monetary assets diminishes. Conversely, monetary liabilities become less burdensome because they are payable in dollars of reduced general purchasing power. In times of deflation the opposite would occur. Gains and losses on monetary items are recognized in general price-level accounting as they accrue.*

*They are calculated by restating the amount of the net monetary items at the beginning of the period and the transactions involving monetary items during the period to units of general purchasing power at the end of the period.<sup>1</sup> The resulting restated amount is compared with the actual amount of net monetary items at the end of the period and the difference is the general price-level gain or loss for the period.*

*Opinions differ on the accounting treatment of general price-level gains or losses. Among the approaches which have been suggested are:*

- (a) inclusion of all general price-level gains and losses in current income,*
- (b) inclusion of only general price-level losses in current income with gains being treated as capital items,*
- (c) treatment of all general price-level gains and losses as capital items, and*
- (d) inclusion of all general price-level gains and losses in current income except for those relating to long-term debt.*

*Since general price-level gains and losses on monetary assets and liabilities arise as a result of an event which occurs during the current period, i.e. the change in the general price-level, and are not related to subsequent events such as the receipt or payment of money, these gains and losses are part of the net income of the period.*

<sup>1</sup>The technique of restating the amount of the net monetary items at the beginning of the period is commonly known as "rolling forward" the opening figures in terms of the current purchasing-power of the dollar.



*It has been argued, however, that the general price-level gain on long-term debt should not be included in current income because it might not be possible to distribute it without raising additional finance. This argument confuses the measurement of profitability with the measurement of liquidity. Even in the absence of inflation, the whole of an enterprise's profit may not be distributable without raising additional finance, for example because it has been invested in, or a commitment made for investment in, non-liquid assets.*

*One suggestion is that the general price-level gain on long-term debt should not be recognized in the current period but deferred to future periods and amortized on an appropriate basis. Under this approach, the liability would be regarded as a source of funds for the related assets and any gain would be deferred until either the debt is retired or the related assets acquired from the funds borrowed are consumed in the operations or sold.*

*The Committee believes that general price-level gains on long-term debt occur in the period in which the general level of prices increases and that these gains are not normally related to the cost of non-monetary assets. In addition, in the Committee's opinion, it is inconsistent to exclude such gains when the income statement has been charged with the cost of borrowing (which would have reflected the lender's estimation of future inflation rates) and depreciation based on the restated amount of the fixed assets.*

*General price-level gains and losses from holding monetary liabilities and assets should be included in the determination of current net income in the general price-level income statement. In some situations, interest is not directly charged to current income but is capitalized as part of the cost of a non-monetary asset to be charged to income in future periods. In these cases, the general price-level gain or loss on the related debt should be applied to the restated cost of such non-monetary assets.<sup>2</sup>*

Ontario Hydro basically agrees with the CICA's recommendation on how to treat annual general-price-level gains. Conceptually, it would be inconsistent to exclude such gains when the income statement shows an interest-expense charge that reflects the inflation expected by both the borrower and the lender. The gain from being in a net monetary liability position in a time of rising prices is, in a real sense, an offset to reported interest expense. If the actual rate of price increase turns out to be less than anticipated, the lender benefits. If the actual rate turns out to be greater, the borrower benefits.

The gain from being in a net monetary liability position, although real, does not produce a current flow of cash; it shows the reduced economic significance of outflows that will have to be made later. Meanwhile interest payments on debt must be made. Recognizing monetary gains in "adjusted income" may enable a company to show "adjusted profits", even though its cash position is deteriorating.

If the rate-review process took account of the higher net income that Ontario Hydro would report under this approach, it would only accentuate Hydro's cash flow problems. Clearly, the higher the debt ratio, the greater would be the significance of these monetary gains, and the public utilities would show the greatest effect. If the whole gain on net monetary items were to be recognized in the period in which it arose, utility rates would be unduly low in periods of high inflation and unduly high in periods of low inflation.

To improve this situation, certain utilities have developed a method of recognizing this gain progressively over time. This amortization approach is illustrated in statements 1-3 (Appendix III). In these statements, the gain is amortized over a thirty-year period, which is the approximate average service life of Hydro's major fixed assets. In effect, this would result in a smoothed postponement of monetary gains. If the economy experienced a steady rate of inflation over several years, an equilibrium point would be reached when the amount amortized in a period would equal the general-price-level gain in the same period. However, because Ontario Hydro's assets are relatively longlived, the transitional period would be quite long.

## **2. Analysis**

### **a. Statement of Financial Position**

The principal changes in the statement of financial position for both the CICA and amortization approaches under the general-price-level restatement are highlighted in the following tables.

**Table 1**

When the statement of financial position is restated in units of general purchasing-power, there is a significant increase in Ontario Hydro's fixed assets, with assets in service and under construction increasing by \$4,169 million and accumulated depreciation by \$1,063 million for a net of \$3,106 million. The increase in 1974 is reflected in equity accounts, with debt-retirement appropriations increased by \$724 million, contributions from the Province by \$150 million, and a surplus from the initial restatement of \$2,522 million. The surplus from the initial restatement represents the net general-price-level adjustment to all the non-monetary items as at 31 December 1973, the initial year of the adoption of general-price-level restatements. The reduction of \$283 million in the Reserve for Stabilization of Rates and Contingencies results from the increased depreciation expense as at 31 December 1973 had Ontario Hydro adopted general price-level restatements from the date of incorporation.

Although the increase in accumulated depreciation was \$1,063 million as at 31 December 1974, the reduction in the Reserve for Stabilization of Rates and Contingencies was only \$283 million, since the cumulative general-price-level gain on long-term debt in 1973 and 1974 of \$820 million was taken into income in 1973 and 1974 and was credited to this reserve account.

**Table 2**

The changes in assets in the statement are identical to those in Table 1. However, the reduction in the reserve for stabilization of rates and contingencies amounts to \$1,065 million, because the cumulative general-price-level gain on long-term debt was not taken directly into income. Instead it was amortized over 30 years, producing the corresponding unamortized general-price-level gain of \$782 million.

Since these figures are reached by applying a general index to historical costs, they give only an indication of what Hydro's financial position would look like if 1974-dollar-value equivalents had applied throughout Hydro's history. The statements introduce two areas of potential confusion for statement users. One is the introduction of "units of general purchasing-power" as a measuring-unit, which may prove hard to understand. The other is that the general rate of inflation does not reflect the effect of specific price changes on Ontario Hydro. In an inflationary

<sup>2</sup>Exposure Draft, *Accounting for Changes in the General Purchasing Power of Money*, CICA, July 1975, Sections 29, 30, and 44-50.

TABLE 1  
Summary of Significant Changes Under  
General-Price-Level Restatements  
for Year Ended 31 December 1974

	Historical Costs <u>\$'000</u>	Units of General Purchasing-Power <u>\$'000 (74)</u>	Increase (Decrease) <u>\$'000</u>
Fixed Assets (In Service and Under Construction)	7,446,771	11,615,335	4,168,564
Accumulated Depreciation	<u>1,093,272</u>	<u>2,155,871</u>	<u>1,062,599</u>
Net Fixed Assets	<u>6,353,499</u>	<u>9,459,464</u>	<u>3,105,965</u>
Equities Accumulated through Debt-Retirement Appropriations	1,015,725	1,739,478	723,753
Reserve for Stabili- zation of Rates and Contingencies	329,510	46,752	(282,758)
Contributions from the Province of Ontario	126,695	276,889	150,194
Surplus from Restatement	-	2,521,693	2,521,693



TABLE 2

Summary of Significant Changes Under  
General-Price-Level Restatements  
for Year Ended 31 December 1974

	Historical Costs <u>\$'000</u>	Units of General Purchasing-Power <u>\$'000 (74)</u>	Increase (Decrease) <u>\$'000</u>
Fixed Assets (In Service and Under Construction)	7,446,771	11,615,335	4,168,564
Accumulated Depreciation	<u>1,093,272</u>	<u>2,155,871</u>	<u>1,062,599</u>
Net Fixed Assets	<u>6,353,499</u>	<u>9,459,464</u>	<u>3,105,965</u>
Equities Accumulated through Debt-Retirement Appropriations	1,015,725	1,739,478	723,753
Reserve for Stabili- zation of Rates and Contingencies	329,510	(735,546)	(1,065,056)
Contributions from the Province of Ontario	126,695	276,889	150,194
Surplus from Restatement	-	2,521,693	2,521,693
Unamortized General Price-Level Gain	-	782,298	782,298

economy, specific price relationships realign rapidly and *unevenly* compared to the general rate of inflation. The effect of specific price changes may be substantially greater or less than that indicated by a *general* rate of inflation. The effect of specific price changes on Ontario Hydro's fixed assets can be better measured in terms of the price index of electrical utility construction. In Appendix IV, Hydro's fixed assets are restated on the basis of the electrical utility construction price index. The total assets in service amount to \$10,911 million, as compared to the general-price-level restated amount of \$9,937 million, a difference of \$974 million. Assets under construction are \$2,136 million, as compared to the general-price-level amount of \$1,678 million, a difference of \$458 million.

There is a marked effect on debt-equity ratios, as shown in Appendix V. Historically, the 1974 ratio was 78:22, which showed a fractional deterioration from 1973. In units of general purchasing-power, the 1974 was 54:46, and shows a considerable improvement over the 1973 ratio of 57:43. In reality there is no change in the financial standing of the Corporation from adopting a new accounting technique. Under this method, statement users would have to develop new levels and methods of interpretation for traditional financial yardsticks. Investors' reaction towards various inflation-accounting techniques are discussed further in this report under the model for current-value accounting.

### ***b. Statement of Operations***

The operating-statement shows a decline from 1973 to 1974 in real revenue from primary power and energy sales, in spite of a 5-per-cent increase in volume and a 5-per-cent increase in rates. Under the historical-cost convention, this would produce a 10-per-cent increase in revenue. However, because inflation in 1974 was more than 10 per cent, the price-level-adjusted statement shows a decline in revenue. This means that Ontario Hydro's rate increase in 1974 was not high enough to cope with inflation.

What is most significant from these statements is the large increase in depreciation expense. If we can accept the premise, as shown in the Statement of Financial Position, that fixed assets are understated on an historical-cost basis by at least 70 per cent, then the effect of this on net income for 1974 is to overstate income by \$88 million. This phenomenon highlights the fact that in terms of units of purchasing-power current customers are not contributing enough towards recovering the *real* investment in plant facilities. These statements show in a general manner that rates to date have been inadequate to replace existing plant.

The statement format as recommended by the CICA and shown in Appendix II, puts the price-level gain from having large net monetary liabilities through the income statement. In an organization financed mainly by debt, this price-level gain can be very large. For example, in 1974 and 1973, when the rate of inflation was high, it amounted to \$500 million (400 per cent of net income reported under the historical-cost convention) and \$320 million (320 per cent of historical net income) respectively. The gain in holding net long-term liabilities is real in an economic sense, because debt is being paid off in deflated dollars during inflation. The timing of the recognition of this benefit is a problem area among accountants. The CICA has taken the approach that the gain results from the change in price-level owing to inflation in the current period. The higher net income that would be reported with these price-level-adjusted statements

would make it appear as though Ontario Hydro were doing very well, when in fact cash flows are extremely tight because of capital expansion and increasing prices.

While the overall value of Hydro's major fixed assets was about \$6 billion at the end of 1974, it is expected that by 1990 the total fixed assets could reach the \$49-billion mark. Financing for this massive capital expansion is expected to come from both internally generated funds and long-term borrowings. The capital market is not unlimited, and to ensure that the cost of borrowings can be maintained at a reasonably low level, the Corporation's financial soundness and stability have to be maintained. The key criteria used in gauging Hydro's financial soundness are times interest coverage and debt-equity ratio. For example, at present times interest coverage of 1.35 is considered appropriate. Coupled with the desired times interest coverage, it is believed prudent to maintain a debt-equity ratio in the range of 80:20 to 82:18. It is thus obvious that in maintaining financial soundness, a certain balance between internally generated funds and long-term borrowings is needed. The amount of internally generated funds is a function of rates. Given a specific rate structure, applying a different model of accounting will not enhance the amount of internally generated funds; the price-level gain adjustment merely represents an internal book adjustment. Although it could be argued that the rate-setting process is technically divorced from the net income on the financial statement, the relationship between the two areas cannot be ignored; for there is a danger that the price-level gain reported under general-price-level accounting would cause public pressure to hold down rates in spite of Hydro's cash-flow requirement. If so, then the balance between internally generated funds and long-term borrowings would be upset; and that would lead to the deterioration of Hydro's financial soundness, and to higher cost for borrowings.

The amortization approach taken in Appendix III would reduce this effect, while still recognizing the price-level gain. In this exhibit the amount of price-level gain is amortized over 30 years, this being the approximate average service life of Hydro's fixed assets.

## **3. Techniques and Assumptions**

### ***a. Index Used***

The index used for restating figures was the gross national expenditure (GNE) implicit price deflator as recommended in the CICA exposure draft and in the exposure drafts in both the U.K. and the U.S. This index is similar to the consumer price index, but covers a much broader range of economic activity. The yearly average indexes were used back to 1949, and the 1949 index for all earlier years. Of the total assets in service, 16 per cent were acquired before 1949. Had the indexing been applied back farther than 1949, total fixed assets in service would have been written up for approximately \$400 million more. This has not been done, because it was considered that the extra work would add very little to the accuracy of the price-level statements.

Some examples of the index factor used for restatement, with 1974 fourth quarter being 100, are summarized in the accompanying table.



1974 Average	104.3
--------------	-------

Used to restate income and some expenses -

1973	118.0
1972	127.0
1960	184.7
1949	248.7

If indexing has been applied back farther -

1940	402.2
1930	376.7

*b. Fixed Assets*

Turning to Appendix IV the problem in restating fixed assets is that significant cash outlays are made for as long as ten years before an asset goes into service, and records are kept on the basis of the in-service year. Capital expenditures and amounts going into service were analysed for individual major generating-facilities for the last eight years. A first-in-first-out basis for dollars spent was assumed, although it is recognized that common facility expenditures apply to all units in a station. From this analysis, a composite year of expenditure percentage related to year of going into service for thermal and hydraulic stations was built up. These percentages were applied to the GNE index factor, and a revised restatement factor was calculated. For example, the factor used for thermal generation for 1973 was 127.9, in place of the GNE factor of 118.0.

Similar calculations were done for the asset classes in total for transformation, transmission, and communication facilities, and revised index factors calculated. All other assets were taken as purchased in the year they went into service.

Construction-in-progress was analysed by major asset class to get an aged breakdown in total, which was then multiplied by the applicable year index factors.

Accumulated depreciation was restated using the same adjusted index factors that were used in the fixed-assets classes. Where asset and depreciation records were not completely suitable for providing data by year of going into service, normal depreciation rates and averages were applied to existing data. It was assumed that these distortions would be minor compared to the large total restatement.

The comparative figures for 1973 and 1972 were obtained by working back from 1974. Disposals and retirements were indexed at overall group total inflation factors and no attempt was made to identify them by year of going into service.

*c. Inventories and Other Items*

Certain general assumptions were made for inventories; for example, coal was purchased throughout the year and nuclear fuel was purchased in the third quarter of the year, and the appropriate quarterly indexes for 1974 and 1973 were applied. Grants from the Province were analysed by year of receipt, and equities accumulated through debt retirement by year of appro-

priation. When these items were restated, the effect of the restatement was reflected in the appropriate accounts in the Statement of Operations. For indirect depreciation, excluding that of the heavy-water plant, 76 per cent was charged to operations and the adjustment was made in operating, maintenance and administrative expense.

*d. Practical Problems*

In the course of preparing these statements several problems were identified that made the preparation of general price-level restatements more than just the simple mechanical process referred to in many texts and articles; but on the other hand, these problems are not insurmountable. If Ontario Hydro were to prepare a published set of price-level statements, the analytical work would have to be done in more depth. It might also be desirable to index farther back than 1949. Subsequent years would require much less effort, since it would be necessary only to update the analyses. Moreover, there is another practical problem associated with applying an index. Statistics Canada revises the index on the basis of updated information as long as a year or more after initial publication. Whether retroactive adjustments are necessary has to be judged purely from a standpoint of materiality.

**4. Assessment of General-Price-Level Accounting**

*a. General Assessment*

The basic intent of general-price-level accounting is to express all assets, liabilities, revenues, and expenses in terms of a standard unit of purchasing-power. This can be accomplished either by expressing the general-price-level figures in terms of a standard unit of purchasing-power that would not change over the years, or by expressing them in dollars of purchasing-power at the date of reporting. The former approach is more in line with the one Statistics Canada took in publishing common dollar series in which the gross national expenditure is expressed in terms of dollars with 1961 purchasing-power. The latter approach is recommended in the CICA exposure draft and in accounting-literature, on the ground that readers of financial statements could better understand figures expressed in terms of dollars of current purchasing-power, and would likely have difficulties in relating to the purchasing-power of money in some bygone year such as 1961. This study has therefore opted for the second approach. However, there is an inherent disadvantage to using dollars with *current* (i.e., reporting-date) purchasing-power as the measuring-unit for general-price-level statement presentation. General-price-level figures published at the end of 1973 in terms of 1973 dollars have to be "rolled forward", as was pointed out earlier, to 1974 dollars, in order to be comparable with 1974 general-price-level figures as reported at the end of 1974. The continuous restatement of previously published figures would likely create confusion amongst many readers of financial statements, and is therefore undesirable.

As was said earlier, price-level restatements merely strive to standardize the yardstick in financial reporting and minimize the measurement-unit errors (errors that arise in failing to adjust the measuring-standard for inflation over a period of time). General price-level restatement in itself is not the answer to the problems inflation creates. Under such a technique, non-monetary assets are usually restated to higher amounts. However, these restated figures do not represent the *real value* of the assets the company employs; for the price structure of specific assets may not move in concert with the general index employed for the restate-

ment. The purchasing-power of the dollar is only meaningful to an organization when the *intended use* of the dollar (e.g., constructing generating-stations) is taken into consideration. Restating historical figures by applying a general index is inadequate, insofar as the *intended use* of the dollar has not been reflected in the process. To deal with this shortcoming in general-price-level accounting, one should apply specific indices (e.g., the electrical-utility price index) that reflect the price changes of goods in which the business deals. However, applying specific indices is more in line with current-value accounting, which will be discussed in the later sections of this report. Applying indices does not fit with the basic concept of general-price-level accounting.

As was said before, general-price-level accounting highlights the gains and losses in holding net monetary liabilities or assets. In an organization largely financed through debt, such as Ontario Hydro, this price-level gain in holding net monetary liabilities can be very large. Such a gain is real in an economic sense, since current borrowings will be paid off in the future in dollars with smaller general purchasing-power. However, the gain offers no improvement to Ontario Hydro's cash-flow position, since it merely represents a book adjustment, and channels no additional cash into the operations. When the organization is expanding at an accelerated rate, it becomes debatable when one ought to recognize the general-price-level gain, as new bonds are floated to finance new capital projects whose costs have escalated with inflation. While conceptually Ontario Hydro can accept the CICA's recommendation to recognize the price-level gain in its entirety in the year of incurrence, the amortization approach would ameliorate the impact. However, since general-price-level accounting is not being recommended for Ontario Hydro, a specific recommendation has not been formulated on this approach.

The usefulness of general-price-level statements to Ontario Hydro is assessed further in the next four sections in more specific terms.

### **b. Financial Planning**

One of Ontario Hydro's main financial objectives is to provide power at the lowest feasible cost while maintaining its own financial soundness. The financial-planning process takes into account a forecast of future loads, the capital facilities required (whether they are replacements or additions is immaterial) and related operating-costs to meet the load demand, and availability of capital. One important consideration in evaluating expenditure projects is economic cost. *Specific* price escalation (e.g., labour, materials, and fuel) is taken into consideration in the evaluating process. When a particular project is chosen for implementation, the financing-decision (equity financing and debt financing) is made within the proper framework of maintaining financial soundness. The key criteria used in gauging financial soundness are times interest coverage and debt-equity ratio. The financing-decision is then factored into the rate setting process in order to generate the amount of equity funds needed to satisfy the key criteria mentioned above.

The general-price-level gain as portrayed in price-level statements merely represents a book adjustment. Since the capital market has already imputed the expected trend of inflation into the setting of interest rates, the recognition of the price-level gain only helps to indicate the cost of debt after making adjustment for inflation. One of Hydro's prime financial objectives is to maintain financial soundness in order to keep the cost of bor-

rowing down to an optimal level compared to other competitors in the capital market. Insofar as the capital market is flexible and the only variable that Ontario Hydro can exercise any control over is its own financial soundness, adjusting for price-level gain on long-term debt will not likely influence the cost of borrowing. One cannot improve financial soundness by making certain book adjustments.

Although the foregoing is a greatly simplified description of the financial-planning process, it nonetheless illustrates that price-level accounting, whereby all assets, liabilities, expenses, and revenues are restated by a general index, has very little to offer this process.

### **c. Internal Reporting**

General-price-level accounting, with the application of one general index, is just an extension of historical-cost accounting. From the point of view of internal reporting, it would not enhance decision-making, control, and appraisal of performance as carried out in Ontario Hydro.

Asset figures restated by a general index do not give management a true picture of the cost of replacing an existing plant or adding a new plant with similar capacity. This is because the general index is not based only on the specific price changes in the goods and services Hydro buys, nor does it take into account the technological and productivity changes inherent in the new assets that Hydro plans to install. As far as the operating-costs are concerned, the price-level-adjusted statements do not reflect the true incremental cost of future operations. For example, the historical cost of fuel, adjusted by the application of a general index, does not reflect the incremental cost of fuel; for the price structure of fuel usually does not move in concert with the changes in general price-level. The effect on the organization of changes in the price of fuel could be substantially greater or less than the general rate of inflation. It would be purely coincidental if the two were identical.

In any case, spending decisions within Hydro must be based on estimates of future incremental costs, which are not the same as replacement costs. They are based on *differences* between alternatives, with future estimates of cash flows appropriately discounted. The primary focus is on minimizing costs. Insofar as one can use accounting-records and projections for decision-making, the historical-cost accounting-system, which uses actual cash flow payments, is better suited to the discounted-cash-flow technique.

In the functions of control and performance appraisal, the need is to establish indicators and targets, together with a signalling-system to assist management in detecting, as early as possible, whether or not the goals of the organization are being achieved. Hydro's main management reporting-system is based on providing comparisons of actual and projected data against original forecast data on a compatible basis, and already includes predictions of cost escalation. Measures of productivity usually involve comparisons of work output against standards and service criteria. Adopting any form of inflation accounting would not improve this function.

### **d. External Reporting**

Even if the CICA exposure draft on *Accounting for Changes in the General Purchasing Power of Money* were to become a firm requirement, supplementary general-price-level statements were recommended for public companies in the private sector only. Therefore, as far as external reporting for investors and



compliance with legal requirements in Canada is concerned, there would be no statutory requirement for Ontario Hydro to follow the regulations and guidelines set out by the CICA. However, as was pointed out earlier, the CICA apparently leaves general-price-level reporting strictly on a voluntary basis even for public companies, and is orienting its efforts towards current-value accounting.

As far as Ontario Hydro is concerned, there are no legal obligations to comply with any requirements in the U.S. However, the concern would have to go beyond the limit of legality. It would be prudent to provide whatever data is generally required in the U.S., to maintain a good standing in that capital market. The FASB in the U.S. also issued an exposure draft, on *Financial Reporting in Units of General Purchasing Power*. In a status report dated 4 June 1976, the FASB has decided to defer further consideration at this time of a statement on general-price-level reporting. While a final judgement was not reached at this time, it was thought that the need for this type of information was now not sufficiently clear to justify imposing upon all preparers of financial statements. The disclosure of certain replacement-cost data has, however, become a requirement of registrants of the SEC; but this will be discussed under current value accounting.

#### e. Revenue Requirements

Using the approach of general-price-level restatement (assuming gains on monetary liabilities are amortized; see Appendix III-3), Ontario Hydro's net income for 1974 was \$48 million, as compared to \$126 million under the historical-cost convention. Appropriation for stabilization of rates and contingencies was \$53 million under the historical-cost statement, whereas there was a withdrawal of \$29 million under the general-price-level approach. Although the restated figures do not accurately portray the current value of assets employed and the current replacement cost of fuel consumed, they nonetheless show in general terms that Hydro's revenues are not high enough to generate any reserve for stabilization of rates and contingencies and that current customers have not been contributing enough towards replacing present assets. However, whether the presentation of general-price-level statements will add much strength to Hydro's case for rate increases is questionable. Undoubtedly the above information generated by general-price-level accounting supports the case for rate increases, but such information has already been presented in the rate-review process in other formats. In the process for determining revenue requirements and the review by the Ontario Energy Board, the main emphasis is on the forecast for the next and later years, and the effect of expected inflation on costs has been assessed and taken into account in a more precise manner than restatement by a single price index. The only visible shortfall is depreciation based on historical cost. However, in the assessment of the total equity charge, the capital required for replacing our current assets and future expansion has been factored into the process for determining revenue requirements. Therefore, it appears that there is little to gain by presenting the above general-price-level statements, except to strengthen the argument. On the other hand, presenting the general-price-level statements where the gains on monetary liabilities are not amortized (Appendix II-3), would weaken the argument.

## B. MODEL FOR CURRENT-VALUE ACCOUNTING

### 1. Introduction

Current value is a general term in use for other valuation sys-

tems than historical-cost and price-level-restated historical-cost. Current-value accounting describes a family of techniques which attempt to deal with values of assets rather than costs. As was mentioned in the earlier part of the report, there are four main procedures, which differ in method of valuing. These are:

1. *Replacement Cost*. The present-day cost to replace the capacity of an asset held with an asset of equivalent capacity in present-day technology.
2. *Reproduction Cost*. The present-day cost to produce an asset identical to the one held.
3. *Resale Price*. The net price after selling expense which could be obtained by selling an asset.
4. *Discounted Future Cash Receipts*. The present value of the future cash flow which can be attributed to an asset.

Of the above techniques, (4) is unsuitable because of the impossibility of identifying cash flows from specific assets in Ontario Hydro's complex generating and distribution system. Method (3) would be hard to justify, since Hydro's major asset values have significance as a going concern rather than for resale. Thus (1) or (2) above are the only approaches really open for Ontario Hydro. Method (1) presents problems by requiring an annual review of assets in the light of the technology current at each year's end, whereas (2) lends itself more readily to an annual update of the previous year's values. Therefore, method (2) has been adopted in presenting current-value financial statements. The basis of the choice is practicality, and it is not thought that method (1) would create substantially different results.

There are two alternative approaches available to arrive at the reproduction cost of assets. One approach is to go through a subjective estimate. A more objective approach is to apply *specific price indices* to the historical figures and arrive at restated figures which approximate current reproduction cost. The latter approach was adopted, and the price index of electrical utility construction was used. The techniques and assumptions are further elaborated in the later sections of the report.

### 2. Statements

A set of current-reproduction-cost statements has been prepared and is included as Appendix VI. The format of these statements is similar to some current-value statements prepared by other companies, and discussed in current literature on the subject. The statements are for 1974 only, since it was felt that recalculating and presenting 1973 figures would not materially improve the analysis. These statements include a Statement of the Reserve for Stabilization of Rates and Contingencies and a Statement of Revaluation Surplus (Appendix VI-3 and -4).

### 3. Analysis

#### a. Statement of Financial Position

The only change from the historical figures is in net fixed assets, fuel for electric generation, and equity accounts. The assets revalued are those directly used in producing power. Fixed assets were revalued using the price index of electrical utility construction prepared by Statistics Canada. It increased the net value of fixed assets by \$4.3 billion. Coal and nuclear inventories were priced at year's end replacement costs, which increased their valuations by \$74 million. The offset of these increases is reflected in the equity accounts, with the gross fixed-asset write-up and the inventory write-up creating the revaluation surplus (Appendix VI-4). The write-up of accumulated depreciation is



offset against former years' earnings (Reserve for Stabilization of Rates and Contingencies) as a reflection of the inadequacy of depreciation charges to keep up with current reproduction costs.

This statement presents the position of the Corporation if its production facilities and inventories were valued at current reproduction costs. The revaluation surplus represents the difference between current values and historical costs of assets and fuel for electric generation. This book adjustment has no contribution towards Hydro's cash requirements. The large deficit in the Reserve for Stabilization of Rates and Contingencies could be interpreted as the shortfall in keeping up with the maintenance of Hydro's capital position during a prolonged period of inflated reproduction cost of assets.

#### ***b. Statement of Operations***

The two changes in the statement of operations are fuel costs and depreciation expense. Depreciation is written up to reflect the higher restated cost of the assets in service. Coal and nuclear fuel costs were restated at the cost of the fuels in the month they were consumed. This increased costs by \$34 million, which is credited to the revaluation surplus (Appendix VI-4). This is an advanced last-in-first-out valuation, and results in charging operations with the current cost of replacing the fuel consumed. These changes go some way to remove the bias of historical costs from operations, so that revenues and costs are stated in terms of equivalent dollars at the time of the transaction. The effect of this is quite marked in 1974, turning net income available for appropriations for debt retirement and to the reserve for stabilization of rates and contingencies from a surplus of \$126 million to a deficit of \$18 million.

### **4. Techniques and Assumptions**

#### ***a. Index Used***

The price index of electrical utility construction was used. This has many limitations, but was used as a more directly applicable index than that of the Gross National Expenditure. The index is available for transmission, transformation, and distribution systems from 1956 only and, for hydraulic generating-stations from 1961 only. It was assumed that thermal and hydraulic generation would have the same index, and that the relationship of the electrical utility construction indexes to the index of the Gross National Expenditure would be the same before the starting-dates of 1956 and 1961. Service equipment and minor fixed assets were restated on the Gross National Expenditure index.

The price index of electrical utility construction is based on Canada-wide data; however, indices could be developed which would be more applicable to Ontario Hydro.

Indexing gives an approximation of reproduction costs. It is not as accurate as establishing the current replacement cost figures for major components of existing facilities and then applying a downgrading factor for present plant inefficiencies.

#### ***b. Fixed Assets***

With reference to Appendix IV, the ratio of the electrical utility index to the Gross National Expenditure index for each of the four categories was calculated. The ratio was then applied to the restated general-price-level figures to arrive at the current reproduction cost of these assets. The same process was used for assets under construction.

### **5. Assessment of Current-Value Accounting**

#### ***a. General Assessment***

The current-value statements (Appendix VI) are a relatively rough attempt at producing financial statements reflecting current reproduction costs. They show how revenues from current customers fail to cover the reproduction costs of the facilities currently in service.

#### ***b. Financial Planning***

As was outlined earlier under general price-level accounting, Ontario Hydro's financial-planning process already addresses itself directly to the effect of inflation. Future costs are adjusted for expected rates of inflation. In the financial forecast, overall cash-flow requirements are evaluated, giving consideration to the trade-offs between financial soundness, rate increases, availability of capital, and the ongoing capital construction program. The required facilities are provided to meet the load demand, and whether they are replacements or additions is not pertinent. To provide financial statements on a reproduction or current-value basis would not benefit this process.

#### ***c. Internal Reporting***

Once the capital construction program has been generally determined, alternative ways of achieving the required physical results are evaluated. Spending-decisions must be based on estimates of future incremental costs, which are not the same as replacement costs. They are based on *differences* between alternatives, with future estimates of cash flows appropriately discounted. The primary focus is on minimizing cost.

Knowing the current value of (say) Hearn GS would serve no useful purpose; one would never replace it with an identical facility. How one replaces current assets depends on whether they need replacing, and not on the fact they would cost more in terms of today's dollars. When that point comes, the spending-decision is again based on the present value of future cash flows of various alternatives, taking into account the terminal value. The original cost of an asset is a past or sunk cost, and cannot influence future decisions. Once an asset has been acquired, the decision on whether or not to use it must be based on incremental costs to the organization, rather than on current-value operating-costs. This latter approach could wrongly lead to acquiring outside services while owned equipment or facilities stand idle.

Insofar as one can use accounting-records and projections for decision-making, the historical-cost accounting-system, which uses actual cash-flow payments, is better suited to the discounted-cash-flow technique. Cost allocations, charges, and transfers between different parts of the Corporation are not payments to an outside entity, and must not be used for economic cost comparisons unless they can be shown to reflect such payments accurately. For example, a Regional Manager deciding to rent equipment rather than hire more help should base his decision on the incremental cost to Hydro, and not on the internal equipment rental rate charged to him. Therefore, basing the rental rate on current-value is of no use to the decision process, and may in fact give the wrong impression about the correct rate to use.

From the standpoint of control, Ontario Hydro's main monthly and quarterly management reporting-system is based on comparisons of actual and projected data against original forecast data. The basis of comparison already contains estimated costs

at the time of the transaction and has therefore been adjusted for predictions of price changes. Even fuel costs, over an extended period, will reflect current prices of fuel. The only factor not reflected is depreciation based on price-indexed or reproduction cost of fixed assets. Since depreciation is a fixed cost, largely beyond the control of operating management, it is very questionable whether including a depreciation charge adjusted for inflation would improve the value of internal statements for purposes of control.

Another consideration is measuring productivity. This usually involves comparing work input to volume of production, and is an effective way of controlling without reference to cost. Adopting any form of inflation accounting would not improve this function.

#### d. External Reporting

As was said earlier, the CICA has recently published a discussion paper on current-value accounting for comments. Whether Ontario Hydro has to adopt current-value accounting for external reporting in Canada will hinge on their findings, which will no doubt be influenced by the trend in other countries.

In the U.S., the SEC have adopted an amendment to Regulation S-X requiring the disclosure of certain replacement-cost data by registrants whose inventories and gross property, plant and equipment, aggregate more than \$100 million and comprise more than 10 per cent of total assets. It has generally been carried through in financial statements covering fiscal years ending on or after 25 December 1976.

The Province of Ontario is a registrant of the SEC, because in the U.S. it issues debt in its name on Hydro's behalf. However, it has been ascertained that the above ruling does not apply to foreign governments and agencies, whose information requirements have been different from those for U.S. companies. It is expected that the SEC ruling would not apply to Ontario Hydro even if it borrowed in its own name. In the future, though, the situation may very well change.

While there is no legal obligation at the present to provide current-value information, it may be desirable for Ontario Hydro to make such information available to maintain its standing in the U.S. capital market. This will depend mainly on investors' interest in current-value financial statements and their value in assessing the performance and financial soundness of business enterprises.

In an article entitled *An Application and Evaluation of Selected Alternative Accounting Income Models*,<sup>3</sup>

Dr John R. Hanna applied different accounting income models to the financial statements of the Imperial Tobacco Company of Canada Ltd (now IMASCO Ltd) for the years 1962 to 1967, in order to evaluate various accounting income models. The models chosen were historical cost (HC), common dollar (CD i.e., general-price-level), current-value (CV), and common-dollar current-value (CDCV). Users of financial statements were also polled about the usefulness of alternative income concepts. In the survey, the five largest of five types of Canadian financial institutions - banks, trust companies, life-insurance companies, mutual funds, and investment houses - were approached. Although only twenty-five companies were surveyed, these nonetheless included the most capable users of financial information. In the final analysis, only twenty-one companies were included, because four companies declined to co-operate.

Statements portraying the various accounting-models were made available in advance to the chief equity security analyst of

each of these companies. Each analyst was asked to review the various alternative sets of statements in the same manner that was employed in conducting the normal review of Imperial Tobacco statements in 1968 when Imperial's actual 1967 statements had been released. Interviews were held with the analysts of each firm after they had completed their analysis in an attempt to insure that the information available on the statements was understood in at least a general sense.

The results of the survey are summarized as follows:<sup>4</sup>

1. All analysts surveyed found some useful data in the alternative sets of statements that were not included in traditional historical-cost statements. They declared that this additional information could improve their ability to analyse Imperial.
2. All analysts but one wanted historical-cost statements retained as the main set of financial statements, because they felt that this model was the only one they clearly understood at the present time.
3. A majority of analysts (see Figure 1) preferred the common-dollar current-value statements as a most useful supplement to historical-cost statements. It should be emphasized that those analysts who preferred CDCV statements as a supplement did so primarily because of the current value data incorporated in these statements. Many analysts chose CDCV statements over CV statements primarily because the CV data desired was unchanged in the CDCV statements and these analysts were willing to accept the additional common-dollar data with the thought that it might prove useful after they had gained further experience with this financial-statement model.
4. Analysts said they would prefer to have supplementary CDCV data for companies in different industries, with the data made available on a current basis for several years, in order to better assess the usefulness of the model.

Figure 1

Rank Concept	1	2	3	4
Historical Cost	28	1	0	1
Common-Dollar Historical Cost	0	1	1	28
Current Value	0	10	20	0
Common-Dollar Current Value	2	18	9	1

<sup>3</sup>Published in the Fall 1972 issue of the *International Journal of Accounting*.

<sup>4</sup>Summary of results extracted from Dr Hanna's article previously cited.

(The number of financial analysts listed in Figure 1 exceeds the number of participating financial institutions. Of the twenty-one institutions, nine had two analysts take part in the survey. Since the views of analysts employed by the same institution could and did differ, all analysts' views were included.)

Based on Dr Hanna's article, it is evident that historical-cost data is still the most preferred. But financial analysts do find some useful data in alternative accounting-models, and they feel that this additional information could improve their ability to analyse companies. Furthermore, these financial analysts prefer some form of current-value accounting. Therefore, now that disclosures of certain current values have become mandatory in the U.S., it may be desirable for Ontario Hydro to make such information available if it is to maintain its status quo in the U.S. capital market.

It is recognized that current-value accounting offers a considerable amount of flexibility to management, simply because there are several procedures one could use in valuing assets, as was discussed previously. Hence there is a concern that because such a method of presenting financial statements is highly susceptible to manipulation, the users of the statements might discount its value. Even if all companies adopt current-value accounting, comparisons between companies will still be merely comparisons of the differences in expectations of the management of the various companies. However, this does not mean that current-value accounting has no value in external reporting. The information it affords presents a more realistic picture of the financial status of the company as management perceives it. If current-value statements are presented as a supplement to historical-cost statements, with full disclosure of the assumptions and techniques that management used in drawing them up, then statement users with the proper financial acumen can better evaluate the performance of the company by assessing the validity of the assumptions, using the historical data as a benchmark.

#### *e. Revenue Requirements*

Current-value financial statements as this report portrays them (Appendix VI) do offer a method of presenting financial statements that more closely reflects the economic reality of Ontario Hydro's operations. These statements give an indication of the level of revenue required to replace inventories and fixed assets at today's higher prices to maintain the present level of operations. However, this is merely a rough indication that Hydro needs higher rate increases. In the process of financial forecasting, the *main emphasis* is on the next and later years. This process is substantially a form of current-value accounting as outlined earlier, since future outlays are projected at estimated future transaction cost. The one missing component is the use of depreciation based on replacement costs. The higher depreciation charges that current-value accounting leads to would undoubtedly support the case for higher rates within the framework of providing power at cost.

However, Hydro's appropriation to the reserve for stabilization of rate and contingencies is an equity charge to generate internal funds to provide capital facilities to meet the future load demand. The costs of these facilities have been based on fore-

casted figures, and hence have taken into account any expected escalation of costs. In essence, the present depreciation, based on replacement cost, is merely another argument for this appropriation.

The model of current-value accounting should be used in Hydro's rate-review process with the Ontario Energy Board to further demonstrate the need for rate increases. Through current-value accounting the argument can be developed that the present customer should be paying for the resources he is using, in terms of today's costs. Consideration could be given to replacing the appropriation to the reserve for stabilization of rates and contingencies with an "asset replacement fund", which might receive better acceptance.

There would be no need to actually implement the model of current-value accounting and to produce periodic current-value statements in order to develop this case. Neither, for that matter, need the whole accounting-model be implemented for other such possible uses as in developing pricing-policies and design-rates.



## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. INTERNAL REQUIREMENTS

Undoubtedly, inflation has a material effect on the financial statements Ontario Hydro prepare in accordance with the generally accepted historical-cost convention. It is vital for management and users of these financial statements to appreciate the effect of inflation on profits, price structures, borrowing-powers, demand for additional capital, and return on invested capital. However, as was outlined in the report, Ontario Hydro's investment and financing-decisions are primarily based on forecasts for the next and later years through a process which recognizes inflation. Presenting financial statements adjusted for inflation would not enhance this process, nor other current processes for decision-making, control, and performance appraisal, which also already factor in escalation where appropriate. However, the argument that present customers should pay for the cost of facilities they are using in terms of today's dollars should be developed to further support revenue requirements and the equity charge in Hydro's rate case. This can be done without implementing the model for current-value accounting and producing periodic financial statements on this basis. It is therefore recommended that

*Ontario Hydro should not adopt inflation-accounting techniques for internal purposes at this time.*

### B. EXTERNAL REQUIREMENTS

It is evident from the discussions in the report that inflation accounting has commanded considerable attention in the last several years, and will be the subject of much further debate. Initial efforts by academics and accounting-bodies were mainly directed towards general-price-level accounting, but quite recently there has been a shift away from this approach and its use has been left on a voluntary basis. The present focus is now on current-value accounting, and different countries are in different stages of development. In Canada, the CICA has recently issued a discussion paper on current-value accounting for comments, so there are no immediate concerns or requirements to satisfy. In the U.S., however, the disclosure of certain replacement cost information has become a requirement for registrants of the SEC. At present this requirement does not apply to foreign governments and agencies, but this may very well change in the future. It is considered prudent, however, for Ontario Hydro to provide whatever information is required to maintain its standing in the U.S. capital market. Therefore it is recommended that

*Ontario Hydro should not adopt inflation-accounting techniques for general purposes of external reporting at this time. However, a further study should be carried out to determine the costs and benefits associated with providing certain replacement-cost information which the SEC requires in the U.S., but which is not yet mandatory for foreign governments and agencies.*

### C. RESPONSE TO CICA

As was mentioned in the report, the CICA requested companies to experiment with techniques of general-price-level accounting, and to submit to them the results of their experiences. Just recently, they have also asked for comments on a discussion paper on current-value accounting. Since both of these approaches have been assessed in terms of Ontario Hydro's needs, it is recommended that

*Ontario Hydro should make this report available to the CICA and other interested parties.*











# exposure draft



ACCOUNTING RESEARCH COMMITTEE

**PROPOSED ACCOUNTING RECOMMENDATIONS**

---

## ACCOUNTING FOR CHANGES IN THE GENERAL PURCHASING POWER OF MONEY

JULY 1975

---

*Note* — Interested parties are asked to submit comments on these Recommendations proposed for inclusion in the CICA Handbook. The Committee would like to hear from those who support the position presented in this exposure draft as well as those who do not agree with it — in whole or in part. Comments are most helpful if they are supported by specific reasons.

---

Comments should be received by DECEMBER 31, 1975 and addressed to:

Miss Gertrude Mulcahy, FCA, Accounting Research Director,

Canadian Institute of Chartered Accountants, 250 Bloor Street East, Toronto M4W 1G5.

---

PREFACE TO EXPOSURE DRAFT

The Recommendations proposed in this Exposure Draft are intended to provide for uniformity in the preparation of financial information to reflect the effects of general price-level changes. The Committee feels that it is premature, at this time, to recommend that all enterprises present this type of information, but encourages experimentation with the use of the proposed restatement techniques. Comments on this Exposure Draft and the results of experimentation in this area will be studied by the Accounting Research Committee to determine whether it should recommend that general price-level information be published with the conventional historical cost financial statements, at least for public companies, for fiscal periods beginning on or after January 1, 1977.

It would be helpful if, during the exposure period, differences from the Committee's proposed Recommendations were disclosed with an indication of the reasons therefor and, if practicable, the effect thereof. The Committee would appreciate receiving comments relating to experiences of enterprises in the implementation of these proposed Recommendations.

ACCOUNTING FOR CHANGES IN THE  
GENERAL PURCHASING POWER OF MONEY

TABLE OF CONTENTS

INTRODUCTION	.01 - .06
DEFINITIONS	.07
PURPOSES OF GENERAL PRICE-LEVEL ACCOUNTING	.08
GENERAL PRESENTATION	.09 - .15
PRINCIPLES OF RESTATEMENT	.16 - .57
Complete Restatement	.16 - .17
General Index	.18 - .22
Current Dollars	.23 - .26
Monetary and Non-monetary Items	.27 - .36
Income Statement Items	.37 - .39
Limits of Restatement of Non-monetary Items	.40 - .43
General Price-level Gains and Losses	.44 - .53
Income Tax Allocation	.54 - .55
Comparative Statements	.56 - .57
CONSOLIDATED FINANCIAL STATEMENTS AND THE EQUITY METHOD OF ACCOUNTING	.58 - .59
FOREIGN BRANCHES AND SUBSIDIARIES	.60 - .62
APPENDICES	
1. Monetary and Non-Monetary Items	
2. Gross National Expenditure (GNE) Implicit Price Index	
EXAMPLE OF THE APPLICATION OF GENERAL PRICE-LEVEL RESTATEMENT	



#### 4/Accounting for Changes in the General Purchasing Power of Money

##### INTRODUCTION

The recent acceleration in the rate of inflation has emphasized the limitations inherent in conventional historical cost financial statements prepared in dollar units of measurement, the general purchasing power of which is declining. For example, these financial statements mix together dollars of different general purchasing power, match and compare revenues and expenses measured in dollar units of varying general purchasing power and do not recognize the gain or loss experienced by an enterprise as a result of the change in the general purchasing power of the dollar. .01

Two methods of accounting which have been suggested to overcome these and other limitations in historical cost financial statements are general price-level accounting and current value accounting. .02

General price-level accounting is the restatement of historical cost financial statements prepared in accordance with generally accepted accounting principles in terms of the same unit of general purchasing power. There is no departure from the historical cost basis of accounting. Only the measuring unit is changed from dollar units to units of general purchasing power. .03

General price-level accounting should not be confused with the proposal that financial statements reflect changes in the specific prices ("current values") of assets or obligations of an enterprise while they are owned or owed. Proponents of current value accounting suggest various measures of current value including selling price, replacement cost, and the present value of future cash flows. Some advocate the adoption of current value accounting rather than general price-level accounting, and general price-level accounting has sometimes been suggested as a means of approximating current values. Although both the general level of prices and most specific prices tend to move in the same direction in a period of inflation or deflation, general price-level accounting and current value accounting are proposals with different objectives, and each should be evaluated on its own merits. .04

This Section relates only to general price-level accounting and its publication does not preclude the Accounting Research Committee from considering current value accounting, either as a replacement for general price-level accounting or in combination therewith. .05

The technique discussed in this Section has equal application in a period of inflation or deflation. The magnitude of the annual rate of change of inflation or deflation is not a factor in the use of the technique since with even a modest annual rate of change, the cumulative effect over a number of years can be significant. .06

DEFINITIONS

The following terms are used in this Section:

.07

- (a) General purchasing power is the ability to purchase goods and services that are offered for sale in exchange for money.
- (b) Inflation is a decrease in the general purchasing power of money.
- (c) Deflation is an increase in the general purchasing power of money.
- (d) Restatement is the process by which historical cost financial statements are converted into general price-level statements.
- (e) General price-level statements are financial statements expressed in terms of the general purchasing power of the dollar at a specified date.
- (f) General price-level information is information which has been derived from general price-level statements.
- (g) Monetary items are balance sheet items fixed in terms of dollars regardless of changes in specific prices or in the general price-level.
- (h) Non-monetary items are balance sheet items that are not monetary, except for retained earnings which is a residual.
- (i) Updating is the process of revising general price-level statements of one date to reflect the general purchasing power of the dollar of a later date.

PURPOSES OF GENERAL PRICE-LEVEL ACCOUNTING

By restating historical cost financial statements in terms of the same unit of general purchasing power, general price-level accounting:

.08

- (a) indicates whether or not the general purchasing power of shareholders' equity has been maintained;
- (b) reflects the impact of general inflation (or deflation) on operating results;
- (c) provides information to calculate the rate of return on shareholders' equity after taking into account the impact of general inflation (or deflation) on the financial position and results of operations;
- (d) measures the increase or decrease in the general purchasing power experienced by the enterprise as a result of holding assets and liabilities, the amounts of which are fixed in terms of dollars; and
- (e) provides for improved inter-period, inter-company and intra-company comparability.

## GENERAL PRESENTATION

General price-level information does not replace the conventional historical cost financial statements. It is presented in addition to and should be clearly distinguished from them. .09

Since the presentation of general price-level information is an innovative area of financial reporting, no format of presentation is prescribed. However, the Committee feels that, although the format of presentation is flexible, certain minimum content is essential to a user's understanding of the data. .10

► When general price-level information is presented the following minimum information should be disclosed: .11

(a) With respect to the balance sheet:

- (i) inventories;
- (ii) working capital;
- (iii) total fixed assets net of the accumulated allowance for depreciation and/or depletion;
- (iv) total assets; and
- (v) total common shareholders' equity.

(b) With respect to the income statement:

- (i) gross revenues;
- (ii) depreciation, depletion and amortization;
- (iii) write-downs of non-monetary items (see paragraph .42);
- (iv) net general price-level gain or loss credited or charged to income (see paragraph .50);
- (v) income before extraordinary items (after items (b)(iii) and (iv);
- (vi) net income for the period; and
- (vii) earnings per common share (see EARNINGS PER SHARE, Section 3500).<sup>1</sup>

It is desirable that disclosure of the information recommended in paragraph .11 be on a comparative basis showing figures for at least the corresponding preceding period. Prior period figures should be updated to state them in terms of the general purchasing power of the dollar at the end of the current accounting period (see paragraph .26). Comparative information for periods prior to the effective date of this Section need not be presented but if it is presented, it should be prepared and presented in accordance with the Recommendations in this Section. .12

---

1 In computing net income per common share, the general price-level gains or losses resulting from monetary preference shares (see paragraph .52) should be added or deducted.



In addition to the minimum recommended in paragraph .11, an enterprise may present such other information as it deems useful in the circumstances. For example, it may be desirable to provide a reconciliation between net income on the historical cost basis and net income on the general purchasing power basis. Consideration might also be given to providing statistics on such matters as restated return on common shareholders' equity, restated dividends per common share and the dividend coverage on restated earnings. .13

Since the disclosure of data in terms of general purchasing power is a recent development, it is also necessary to provide explanatory information. .14

► *Disclosure of general price-level information should include an explanation of the basis of its preparation and what it represents. The explanation would make it clear that:* .15

(a) *general price-level accounting is not current value accounting; and*

(b) *income taxes are based on amounts recorded in the historical cost financial statements (see paragraphs .54 - .55).*

## PRINCIPLES OF RESTATEMENT

### Complete restatement

General price-level information based on the restatement of selected items only will not reflect the total impact of the effect of changing general price-levels on an enterprise and may be misleading. Such information, therefore, should only be prepared on the basis of calculations derived from complete restatement of the historical cost financial statements. .16

► *The calculation of general price-level information should be based on a complete restatement of the historical cost financial statements and not on a partial or selected item basis.* .17

### General index

General price-level information is intended to show the effect of changes in the general level of prices on financial results. Therefore, a broadly-based index which reflects changes in the general purchasing power of the dollar should be used. .18

The Committee concludes that the most appropriate index is the Gross National Expenditure (GNE) Implicit Price Index. The Consumer Price Index (CPI), which has been suggested as an alternative, does not have the broad base which is necessary in general price-level accounting. .19

The Committee recognizes that the use of a general index such as the GNE Implicit Price Index will not respond to the problems of specific price changes experienced by a particular industry or enterprise. Specific price indices reflect factors other than changes in the general purchasing power of money and, therefore, should not be used in general price-level accounting. .20

## 8/Accounting for Changes in the General Purchasing Power of Money

► *The index to be used for the purposes of preparing general price-level statements is the GNE Implicit Price Index.*<sup>2</sup> .21

Some Canadian enterprises present their historical cost financial statements expressed in a foreign currency. In such cases, a general price index relating to that currency (rather than Canadian dollars) should be used for the purpose of preparing general price-level statements. .22

### Current dollars

In defining units of general purchasing power, it is necessary to select a common date to which units of general purchasing power are to be related. .23

Two approaches have been suggested: a base year and the end of the current period to which the financial statements relate. The use of a base year could lead to differing base dates being selected, thus making inter-company comparisons meaningless. The use of the end of the current period has the advantage that price-level information can be directly related to other contemporary information. Current economic actions take place in terms of current dollars. .24

The Committee, therefore, feels that the general price-level information expressed in terms of units of general purchasing power as at the end of the current period to which the financial statements relate would be more useful. For comparative purposes, it is necessary to update prior period general price-level information in terms of current general purchasing power (see paragraph .57). .25

► *General price-level information should be presented in terms of units of general purchasing power as at the end of the current accounting period.* .26

### Monetary and non-monetary items

The preparation of general price-level statements requires identification and segregation of monetary and non-monetary items (see Appendix 1). .27

Because of their nature, monetary items are already expressed in the historical cost financial statements in terms of units of general purchasing power at the end of the current accounting period. .28

---

<sup>2</sup> For ease of reference GNE Implicit Price Indices are provided in Appendix 2

Since units of general purchasing power are expressed as at the end of the current accounting period (see paragraph .26), monetary items held at that date will already be stated in the same units of general purchasing power in both the historical cost financial statements and the general price-level statements - no restatement is necessary. For example, a bank loan incurred at an earlier date and unpaid at the end of the current accounting period is still payable at the original dollar amount even though these dollars may now have a general purchasing power different from that at the date the debt was incurred; an account receivable arising at an earlier date and unpaid at the end of the current accounting period is still collectible at the original dollar amount even though these dollars may now have a general purchasing power different from that at the date the receivable arose. .29

Holders of monetary items gain or lose general purchasing power by reason of changes in the general level of prices. In times of inflation, the purchasing power of monetary assets diminishes. Conversely, monetary liabilities become less burdensome because they are payable in dollars of reduced general purchasing power. In times of deflation the opposite would occur. Gains and losses on monetary items are recognized in general price-level accounting as they accrue (see paragraphs .44 - .53). .30

Non-monetary items are expressed in the historical cost financial statements in terms of units of general purchasing power as at the dates they were acquired or incurred. Therefore, non-monetary items held at the current balance sheet date are restated for changes in the general level of prices since they were acquired or incurred. For example, land acquired at an earlier date and held at the end of the current accounting period will be restated to reflect its cost in terms of units of current general purchasing power. .31

Holders of non-monetary items gain or lose purchasing power by reason of changes not only in the general level of prices but also by reason of changes in the relationships among prices arising from technological and market influences. The holders gain or lose purchasing power if the specific price of the item rises or falls at a rate different from that of the general level of prices. As in historical cost accounting, gains and losses on non-monetary items are not normally recognized in general price-level accounting until there is a disposal of such items. However, the amounts of such gains and losses may differ. In historical cost financial statements, the entire increase or decrease in the market price is recognized as a gain or loss. In general price-level accounting only the increase or decrease in the market price in excess of or below the restated cost is recognized as a gain or loss. For assets used in the business, depreciation or amortization is recognized in the same time periods in both historical cost financial statements and in general price-level statements although the amounts differ. .32

► *Monetary and non-monetary items must be distinguished for the purposes of preparing general price-level statements. Since monetary items in the current historical cost balance sheet are stated in units of current general purchasing power, they should be included at the same amounts in current general price-level statements. Non-monetary items should be restated to units of current general purchasing power.* .33



## 10/Accounting for Changes in the General Purchasing Power of Money

► *The list of monetary and non-monetary items provided in Appendix 1 forms an integral part of this Section and the classification of items therein should be adhered to in the preparation of general price-level statements.* .34

The list in Appendix 1 classifies accumulated deferred income tax balances as monetary. However, some maintain that, in accordance with the deferral method of tax allocation recommended in CORPORATE INCOME TAXES, Section 3470, accumulated deferred income tax balances represent costs or cost savings which are deferred and will be charged or credited to income in future periods. Since these balances do not purport to represent income taxes which are expected to be paid or recovered (as under the accrual method of income tax allocation), it is argued that they should be treated as non-monetary. .35

The Accounting Research Committee is of the opinion that accumulated deferred income tax balances should be treated as monetary. When reversals of the underlying timing differences occur, they will give rise to changes in accumulated deferred income tax balances in terms of current general purchasing power at that time. Furthermore, the treatment of accumulated deferred income tax balances as monetary gives recognition to general price-level gains or losses in the period of the change in the general purchasing power of money rather than deferring such gains or losses until the period of the draw-down, as is the case under the non-monetary treatment. The Committee feels that the non-monetary classification of accumulated deferred income taxes leads to a distortion in the general price-level income statement in the period of the draw-down. .36

### Income statement items

Revenue and expenses are stated in historical cost financial statements in terms of the general purchasing power of the dollar at the dates of the originating transactions. In the general price-level statements, these items are reflected in terms of units of general purchasing power at the end of the current accounting period. .37

The components (i.e. costs and proceeds) of gains or losses arising from the sale of assets and discharge of liabilities in the historical cost financial statements should be restated to units of general purchasing power as at the end of the current accounting period. .38

► *Income statement items should be stated in terms of units of general purchasing power as at the end of the current accounting period.* .39

### Limits to restatement of non-monetary items

The same accounting principles used in the preparation of conventional historical cost financial statements apply to general price-level statements. Only the unit of measurement is changed. Accordingly, the restatement of non-monetary assets should not result in their being reflected in general price-level statements in excess of their value. For example, inventories should not be restated at more than net realizable value and property, plant and equipment should not be restated at more than the value which will normally be recovered by the enterprise from operations. It should be recognized that competitive or regulatory factors may limit the extent of the recovery. In addition, the determination of recoverable value should take into account the fact that general price-level restatement does not change the amounts which will be allowed in calculating income taxes. .40

It may also be necessary to reduce non-monetary liabilities after restatement. .41  
 For example, an estimated accrual for future warranty obligations may be restated in excess of the amount which would be required to discharge the obligation. In such cases, it would be necessary to make an appropriate write-down of the restated liability.

The amount by which a non-monetary asset or liability in the current general price-level balance sheet is reduced below the amount determined in the restatement process should be charged or credited to income in the general price-level income statement and, when material, disclosed separately in the general price-level information. In the initial restatement, any reduction relating to non-monetary assets or liabilities at the beginning of the period would be charged or credited to retained earnings in the adjustment to retained earnings resulting from the initial restatement. .42

Non-monetary preference shares should not be restated to an amount in excess of their fixed liquidation price. When preference shares have been restated to an amount equal to their fixed liquidation price, they should thereafter be classified as a monetary item (see also paragraphs .51 - .52). .43

#### General price-level gains and losses

General price-level gains and losses are recognized on monetary items. They are calculated by restating the amount of the net monetary items at the beginning of the period and the transactions involving monetary items during the period to units of general purchasing power at the end of the period. The resulting restated amount is compared with the actual amount of net monetary items at the end of the period and the difference is the general price-level gain or loss for the period. .44

Opinions differ on the accounting treatment of general price-level gains or losses. Among the approaches which have been suggested are: .45

- (a) inclusion of all general price-level gains and losses in current income;
- (b) inclusion of only general price-level losses in current income with gains being treated as capital items;
- (c) treatment of all general price-level gains and losses as capital items; and
- (d) inclusion of all general price-level gains and losses in current income except for those relating to long-term debt.

Since general price-level gains and losses on monetary assets and liabilities arise as a result of an event which occurs during the current period, i.e. the change in the general price-level, and are not related to subsequent events such as the receipt or payment of money, these gains and losses are part of the net income of the period. .46

## 12/Accounting for Changes in the General Purchasing Power of Money

It has been argued, however, that the general price-level gain on long-term debt should not be included in current income because it might not be possible to distribute it without raising additional finance. This argument confuses the measurement of profitability with the measurement of liquidity. Even in the absence of inflation, the whole of an enterprise's profit may not be distributable without raising additional finance, for example because it has been invested in, or a commitment made for investment in, non-liquid assets.

.47

One suggestion is that the general price-level gain on long-term debt should not be recognized in the current period but deferred to future periods and amortized on an appropriate basis. Under this approach, the liability would be regarded as a source of funds for the related assets and any gain would be deferred until either the debt is retired or the related assets acquired from the funds borrowed are consumed in the operations or sold.

.48

The Committee believes that general price-level gains on long-term debt occur in the period in which the general level of prices increases and that these gains are not normally related to the cost of non-monetary assets. In addition, in the Committee's opinion, it is inconsistent to exclude such gains when the income statement has been charged with the cost of borrowing (which would have reflected the lender's estimation of future inflation rates) and depreciation based on the restated amount of the fixed assets.

.49

► *General price-level gains and losses from holding monetary liabilities and assets should be included in the determination of current net income in the general price-level income statement. In some situations, interest is not directly charged to current income but is capitalized as part of the cost of a non-monetary asset to be charged to income in future periods. In these cases, the general price-level gain or loss on the related debt should be applied to the restated cost of such non-monetary assets.*

.50

General price-level gains or losses associated with monetary preference shares are capital items because they relate to a shareholders' equity item. Accordingly, they should be excluded in the determination of net income. However, such gains or losses should enter into the calculation of earnings per common share because those items will accrue to the common shareholders.

.51

► *General price-level gains or losses associated with monetary preference shares should be:*

.52

(a) *charged or credited to common shareholders' equity in the general price-level statements;*

(b) *included in the calculation of earnings per common share (see paragraph .11).*

► *When general price-level information is provided, the net general price-level gain or loss which has been credited or charged to income should be disclosed.*

.53



Income tax allocation

It has been suggested that tax allocation principles apply in general price-level statements for income taxes that may be payable in the future if the higher amounts assigned to non-monetary assets through restatement are realized through utilization or sale. Such restatements of non-monetary assets give rise to amounts which have no counterpart for income tax purposes and, therefore, are considered to be permanent differences. Accordingly, it is not appropriate to provide for deferred income taxes on such amounts. .54

► *The income tax provision in the general price-level income statement should be the income tax provision in the historical cost income statement restated to units of general purchasing power as at the end of the current accounting period.* .55

Comparative statements

To make general price-level information presented at different dates comparable, prior period figures must be updated. Prior period figures are updated by multiplying by the ratio of the index number at the end of the current accounting period to the index number at the end of the previously reported accounting period. .56

► *When comparative general price-level information is shown, it should be updated to units of general purchasing power as at the end of the current accounting period.* .57

CONSOLIDATED FINANCIAL STATEMENTS  
AND THE EQUITY METHOD OF ACCOUNTING

When the historical cost financial statements are prepared on a consolidated basis using the purchase method, the assets and liabilities of a subsidiary at the date of acquisition are included in the consolidation on the basis of the amounts assigned to them at the date of acquisition. These amounts are regarded as the assigned "costs" of these assets and liabilities to the consolidated group, even though there may be a minority interest therein. When restating consolidated historical cost financial statements, the restatement factors are applied to the amounts from the date of acquisition. The actual dates of acquisition of assets and assumption of liabilities by a subsidiary are only relevant in preparing its own general price-level statements. Similarly, when the equity method of accounting is used, price-level restatement factors are applied from the date of acquisition by the investor. .58

Where the pooling of interests method has been used to account for a business combination, the parties to the combination are considered to have always been combined. Price-level adjustments should be calculated without reference to the date of the business combination. .59

FOREIGN BRANCHES AND SUBSIDIARIES

Historical cost financial statements of foreign branches or subsidiaries are usually prepared in terms of the currency of the countries in which the branches or subsidiaries operate. The preparation of consolidated financial statements requires that the financial statements of the foreign branches or subsidiaries be translated to the reporting currency of the parent. In general price-level statements, the question arises whether first to translate the financial statements of the branch or subsidiary into the reporting currency of the parent company and then to restate using an index reflecting general purchasing power changes in the country of the parent or first to restate using an index reflecting general purchasing power changes in the foreign country and then to translate the resulting figures into the reporting currency of the parent company. .60

The Committee is of the opinion that the translate-restate method should be used. The use of the translate-restate procedure has the following advantages: .61

- (a) It results in all items in the consolidated financial statements (regardless of their divisional or corporate location) being stated in terms of the general purchasing power of money in the country of the parent company. This achieves one of the objectives of general price-level accounting, namely to express all amounts in a single unit of measurement. (The use of the restate-translate method is inconsistent with this objective since it results in a mixture of different rates of change in purchasing power.)
- (b) The updating of general price-level information of previous years prepared on this basis will not change previously reported key ratios. (The use of the restate-translate approach would theoretically necessitate updating by using foreign indices which may change previously reported ratios.)

The Committee recognizes that the rate of inflation or deflation in the country where a foreign subsidiary operates may be so great as to affect the significance of its conventional historical cost financial statements. General price-level financial statements may, in these cases, replace the historical cost financial statements for the purpose of reporting to shareholders domiciled in that foreign country but should not be used for the purpose of preparing consolidated general price-level information for presentation to parent company shareholders. .62

APPENDIX 1MONETARY AND NON-MONETARY ITEMSINTRODUCTION

Paragraph .07(g) and (h) and .27-.36 of this Section present criteria for distinguishing monetary and non-monetary items. This Appendix provides examples of classification with an explanation of the reason for classification when needed. The list is not all-inclusive and classification of individual items not included in this Appendix should be made according to the general principles in this Section.

It should be recognized that some non-monetary items may appear in the same amounts in both general price-level financial statements and in historical cost financial statements, when for example, a non-monetary asset or liability has been written down, (see paragraphs .40-.42 on "limits to restatement of non-monetary items"). In addition, transactions occurring at or near the end of the financial period are not changed in the process of restatement. Even though the amount of the item is not changed in the process of restatement, this does not necessarily identify it as a monetary item.

	<u>Monetary</u>	<u>Non-Monetary</u>
Cash on hand or on deposit (domestic currency)	X	
Foreign currency on hand and claims to foreign currency		See comment at left

If foreign currency items are stated at the closing rate of exchange in the historical cost financial statements they should be treated as monetary. If they are stated at historical rates of exchange in the historical cost financial statements they should be treated as non-monetary, but not restated in excess of the amount which would have appeared in the historical cost financial statements if the closing rate of exchange had been used for translation. Any write-downs should be treated in accordance with paragraph .42.

Investments	
Shares	X
(accounted for on the cost method)	
Shares are non-monetary because their prices are subject to fluctuation.	
Bonds	X



16/Accounting for Changes in the  
General Purchasing Power of Money

	<u>Monetary</u>	<u>Non-Monetary</u>
Convertible bonds	X	
Until converted, these represent an entitlement to receive a fixed number of dollars.		
Accounts and notes receivable (long and short-term)	X	
Inventories		
Produced under fixed price contracts and accounted for at the contract price.	X	
These items are, in substance, accounts receivable in a fixed amount and are, therefore, monetary.		
Other inventories		X
Prepaid expenses (other than interest)		X
These represent claims to future services, not claims to a fixed number of dollars. The prices of identical services may fluctuate. Therefore, prepaid expenses are non-monetary.		
Investments accounted for on the equity method		See comment at left
If an investment is carried at cost, it is non-monetary. If it is accounted for by the equity method see paragraph .58.		
Fixed Assets		X
Accumulated allowance for depreciation and depletion		X
Cash surrender value of life insurance	X	
Advances paid on purchase contracts		X
The advances are not claims to a fixed number of dollars but claims to goods and services whose prices may fluctuate.		
Intangible assets		X

	<u>Monetary</u>	<u>Non-Monetary</u>
Accumulated deferred income tax debits (see paragraphs .35-.36)	X	
Unamortized premium or discount and prepaid interest on bonds or notes payable.	X	
Inseparable from the debt to which it relates, a monetary item.		
Other deferred charges		X
Accounts payable, accrued charges and notes payable	X	
Amounts payable in foreign currency  (See discussion under foreign currency on hand and claims to foreign currency)		
Warranty obligations  These are obligations to provide non- monetary goods or services.		X
Bonds payable and other long-term debt	X	
Convertible bonds payable  - Until converted, these are obligations to pay a fixed number of dollars.	X	
Accumulated deferred income tax credits (see paragraphs .35-.36)	X	
Minority interest (see paragraph .58)		X
Preference shares		See comment at left
Preference shares carried at an amount equal to their fixed liquidation or redemption price are monetary because the claim of the preference share- holders on the assets of the enterprise is in a fixed number of dollars; pre- ference shares carried at less than their fixed liquidation or redemption price are non-monetary but become monetary when restated to an amount equal to their fixed liquidation or redemption price (see paragraph .43).		

18/Accounting for Changes in the  
General Purchasing Power of Money

	<u>Monetary</u>	<u>Non-Monetary</u>
Convertible preference shares		See comment at left
Until converted these should be treated in the same manner as other preference shares.		
Common shares*		X
Contributed surplus*		X
Appraisal increase credits*		X
Retained earnings*		See comment at left

This is a residual and need not be  
classified.

\* An acceptable alternative to restating  
the individual components of common  
shareholders' equity is as follows:

a) At the time an enterprise first  
restates its historical cost  
financial statements, the  
aggregate amount of common share-  
holders' equity stated in terms  
of units of current general purchas-  
ing power can be determined simply as  
a residual after all other items have  
been restated.

b) In subsequent accounting periods,  
end-of-period common shareholders'  
equity stated in units of current  
general purchasing power can be  
determined as follows:

(i) update the amount of common  
shareholders' equity stated  
in terms of units of general  
purchasing power at the end  
of the prior period to units  
of current general purchasing  
power.



	<u>Monetary</u>	<u>Non-Monetary</u>
(ii) increase or decrease the amount determined in (i) by:		
a) the amount of any capital transactions during the period restated to units of general purchasing power at the end of the current accounting period;		
b) net income in units of current general purchasing power as reported in the general price-level income-statement; and		
c) adjustments resulting from general price-level gains or losses on monetary shareholders' equity items.		

The end result will be the end-of-period amount of common shareholders' equity stated in units of general purchasing power at the end of the current accounting period.

20/Accounting for Changes in the  
General Purchasing Power of Money

APPENDIX 2

GNE IMPLICIT PRICE INDEX

Yearly Averages 1926 - 1974 (1961 = 100)

1926	50.4
1927	49.8
1928	49.6
1929	50.2
1930	48.8
1931	45.9
1932	41.6
1933	40.8
1934	41.4
1935	41.6
1936	42.9
1937	44.1
1938	44.0
1939	43.7
1940	45.7
1941	49.3
1942	51.5
1943	53.3
1944	55.0
1945	56.3
1946	58.0
1947	63.1
1948	70.8
1949	73.9
1950	75.6
1951	84.3
1952	87.9
1953	87.8
1954	89.2
1955	89.7
1956	93.0
1957	95.0
1958	96.3
1959	98.3
1960	99.5
1961	100.0
1962	101.4
1963	103.2
1964	105.8
1965	109.2
1966	114.1
1967	118.6
1968	122.4
1969	127.8
1970	133.9
1971	138.1
1972	144.7
1973	155.7
1974	176.1

Quarterly Averages 1947 - 1974 (1961 = 100)

	<u>1st</u>	<u>2nd</u>	<u>3rd</u>	<u>4th</u>
1947	59.6	62.7	63.5	66.4
1948	68.0	70.0	72.5	72.7
1949	73.9	73.9	74.8	73.0
1950	74.3	74.6	75.6	77.8
1951	81.6	85.1	84.7	85.8
1952	86.9	88.9	88.8	87.1
1953	86.8	88.0	88.4	88.2
1954	88.5	89.5	89.7	89.2
1955	89.6	89.7	90.1	89.6
1956	91.5	92.3	94.1	94.0
1957	94.1	94.9	95.8	95.1
1958	95.4	96.9	96.6	96.4
1959	98.0	98.3	98.4	98.6
1960	99.8	99.6	99.2	99.4
1961	100.2	99.8	99.8	100.2
1962	100.8	101.1	101.5	102.1
1963	102.5	103.1	103.2	104.1
1964	104.7	105.4	106.3	106.8
1965	107.8	108.5	110.1	110.5
1966	112.3	113.6	115.0	115.3
1967	117.2	118.4	118.8	119.8
1968	121.3	121.9	122.9	123.6
1969	125.5	127.6	128.6	129.5
1970	132.0	133.0	134.5	135.8
1971	135.9	137.6	138.6	140.1
1972	141.9	143.4	146.0	147.5
1973	149.9	153.5	158.3	161.1
1974	167.2	173.5	180.2	183.8

SOURCE: Statistics Canada, April 1975.

DESCRIPTION OF GNE IMPLICIT PRICE INDEX

The GNE Implicit Price Index is published quarterly by Statistics Canada in "National Income and Expenditure Accounts" (13-001). The index is available some two to three months after the end of the quarter to which it applies. The GNE Index is a measure of price change for all final expenditures on goods and services produced in the domestic economy. It is, by far, the most comprehensive of all indices available in Canada.

SPECIFIC PROBLEMS

1. The GNE Implicit Price Index represents the average for a specific quarter. For restatement purposes it is necessary to have an end-of-period index. It would be acceptable to use quarterly indices as an approximation of the period end.



## 22/Accounting for Changes in the General Purchasing Power of Money

2. Since the GNE Implicit Price Index is issued substantially in arrears it is necessary to approximate a figure for a quarter not yet available.

One method of approximation is to interpolate the progression of the GNE Index using the progression of the Consumer Price Index (CPI) which is published monthly by Statistics Canada, as follows:

$$400 \text{ (GNE Index for 1st quarter)} \times \frac{390 \text{ (CPI index for May)}}{380 \text{ (CPI index for February)}}$$

$$= \text{(approximated GNE index for 2nd quarter)} = 410$$

Since the GNE Implicit Price Index is an average for the quarter, an acceptable alternative method in this example would be to multiply the first quarter GNE Index by the average of the CPI Index for April, May and June divided by the average of the CPI Index for January, February and March.

Other approximations which have been used employ econometric models.

EXAMPLE OF THE APPLICATION OF GENERAL PRICE-LEVEL RESTATEMENTPREPARATION

(This example has been furnished by the Institute's Research staff)

The following example illustrates briefly how general price-level statements might be prepared from historical cost financial statements. It is not suggested that it should be a model for all situations since the circumstances of each enterprise will be different. Assumptions relating to the accumulation of asset costs, liabilities, revenues and expenses made in this example will not necessarily have general applicability and care should be taken in applying the concepts to a specific enterprise.

Given Data

		Factors for restatement @	
<u>Average Indices</u>		<u>Dec. 31, Yr.5</u>	<u>Dec.31, Yr.6</u>
Yr. 1	248.1	1.44	
Yr. 2	274.3	1.30	
Yr. 3	285.6	1.25	
Yr. 4	305.2	1.17	1.38
Yr. 5	333.1	1.07	1.26
Yr. 6	388.4		1.08

Index at December 31 (assumed to be equal to last quarter)

Yr. 5	356.2			1.18
<u>Quarterly Indices</u>		<u>Yr.5</u>	<u>Yr.6</u>	
1st Quarter	313.9	362.7	1.13	1.16
2nd Quarter	320.7	369.8	1.11	1.14
3rd Quarter	341.7	400.4	1.04	1.05
4th Quarter	356.2	420.6	1.00	1.00

Notes

Since the GNE Implicit Price Index series does not provide an index at the end of the period, it is considered appropriate to use the index for the latest quarter as an approximation of a year end index. This has been done throughout this example.

These indices are provided for the purposes of this example only and appropriate indices should be obtained by reference to Statistics Canada publications. Factors for restatement are calculated by dividing the end of the year index by the index at the date at which the transaction arose. This may be a year or a quarter. For example, the restatement of transactions arising in the 1st quarter of Year 6 in terms of general purchasing power at the end of Year 6 would be achieved by applying the following factor:

$$\frac{\text{Index at end of Yr. 6}}{\text{Index in 1st quarter of Yr. 6}} = \frac{420.6}{362.7} = 1.16$$

24/Accounting for Changes in the  
General Purchasing Power of Money

Financial statements on historical cost basis in Canadian dollars

GPL Company Ltd.  
Balance Sheet as at December 31, Yr. 6

	Yr. 6 \$ (000)	Yr. 5 \$ (000)
<u>Assets</u>		
Current assets		
Cash	\$ 341	\$ 200
Accounts receivable	438	400
Inventories, at cost (FIFO)	500	610
Total current assets	<u>\$1,279</u>	<u>\$1,210</u>
Fixed assets - at cost		
Less: accumulated depreciation	<u>338</u>	<u>264</u>
	<u>\$ 522</u>	<u>\$ 536</u>
Investments - at cost		
	<u>\$ 110</u>	<u>\$ 110</u>
	<u><u>\$1,911</u></u>	<u><u>\$1,856</u></u>
<u>Liabilities and Shareholders' Equity</u>		
Current liabilities		
Accounts and notes payable	\$ 215	\$ 331
Long-term debt (repayable in foreign currency)	200	200
Total liabilities	<u>\$ 415</u>	<u>\$ 531</u>
Deferred income taxes	<u>\$ 220</u>	<u>\$ 200</u>
Shareholders' equity		
Preferred shares	\$ 100	\$ 100
Common shares	150	150
Retained earnings	1,026	875
Total shareholders' equity	<u>\$1,276</u>	<u>\$1,125</u>
	<u><u>\$1,911</u></u>	<u><u>\$1,856</u></u>



*GPL Company Ltd.*  
*Statement of Retained Earnings*  
*for the year ended December 31, Yr. 6*

	Yr. 6 \$ (000)	Yr. 5 \$ (000)
Balance at the beginning of the year	\$ 875	\$ 656
Add: net income for the year	211	279
	<u>\$1,086</u>	<u>\$ 935</u>
Less: dividends paid during the year	60	60
Balance at the end of the year	<u>\$1,026</u>	<u>\$ 875</u>

*GPL Company Ltd.*  
*Income Statement*  
*for the year ended December 31, Yr. 6*

	Yr. 6 \$ (000)	Yr. 5 \$ (000)
Sales (net)	\$3,012	\$2,624
Cost of sales	<u>1,765</u>	<u>1,391</u>
Gross profit	<u>\$1,247</u>	<u>\$1,233</u>
Operating expenses		
Depreciation	\$ 86	\$ 80
Selling and administrative	748	605
Interest	<u>30</u>	<u>30</u>
	<u>\$ 864</u>	<u>\$ 715</u>
Operating profit	\$ 383	\$ 518
Profit on sale of fixed assets	<u>12</u>	<u>-</u>
Income before income taxes	<u>\$ 395</u>	<u>\$ 518</u>
Income taxes - current	\$ 164	\$ 224
- deferred	<u>20</u>	<u>15</u>
	<u>\$ 184</u>	<u>\$ 239</u>
Net income for the year	<u>\$ 211</u>	<u>\$ 279</u>

26/Accounting for Changes in the  
General Purchasing Power of Money

Restatement of non-monetary items at December 31, Yr.5 (items A to F)

A. Inventories

It is assumed that inventories turn over twice a year. The average index for the last six months can be calculated by taking the average of the two average indices for the last two quarters as follows:

$$\frac{341.7 + 356.2}{2} = 349.0$$

Therefore, the restatement factor applicable to inventories at December 31, Yr. 5 is  $\frac{356.2}{349.0} = 1.02$

Restated balance, therefore, is \$610,000 x 1.02 = \$622,000

B. Fixed Assets

<i>Year of Acquisition</i>	<i>Historical Cost</i>	<i>Factor</i>	<i>Restated Amount (Yr.5)</i>	<i>% Accumulated Depreciation</i>	<i>Restated Accumulated Depreciation (Yr. 5)</i>
Yr. 1	\$ 100,000	1.44	\$ 144,000	50	\$ 72,000
Yr. 2	240,000	1.30	312,000	40	125,000
Yr. 3	260,000	1.25	325,000	30	98,000
Yr. 4	200,000	1.17	234,000	20	47,000
Yr. 5	-	-	-	-	-
	<u>\$ 800,000</u>		<u>\$1,015,000</u>		<u>\$ 342,000</u>

Assumptions: Even accumulation of fixed asset costs throughout the year (average index for year of acquisition used); depreciation calculated on a straight line basis; useful life 10 years; no salvage value; full year's depreciation in year of acquisition; no depreciation in year of disposition.

C. Investments

<i>Year of Acquisition</i>	<i>Historical Cost</i>	<i>Factor</i>	<i>Restated Amount (Yr. 5)</i>
Yr. 3	\$ 110,000	1.25	\$ 138,000

D. Long-term debt in foreign currency

\$200,000 Canadian translated at the historical exchange rate in Yr. 2 (exchange rate at time of incurring the debt FC 1 = \$1.00). The current exchange rate at the end of Yr. 5 was FC 1 = \$1.50 which would indicate a debt of \$300,000 Canadian. No write-down is, therefore, necessary.

<i>Year Incurred</i>	<i>Historical Amount</i>	<i>Factor</i>	<i>Restated Amount (Yr. 5)</i>
Yr. 2	\$ 200,000	1.30	\$ 260,000

E. Preferred shares

<i>Paid In</i>	<i>Historical Amount</i>	<i>Factor</i>	<i>Restated Amount (Yr. 5)</i>
Yr. 1 25,000 shares	\$ 25,000	1.44	\$ 36,000
Yr. 3 50,000 shares	50,000	1.25	63,000
Yr. 4 25,000 shares	25,000	1.17	29,000
	<u>\$ 100,000</u>		<u>\$ 128,000</u>

The redemption price of all the shares is \$110,000, therefore a write-down to \$110,000 is indicated (i.e. \$128,000 - 110,000 = \$18,000).

This write-down is credited to retained earnings. Since preferred shares have been restated to their redemption price they become monetary in Yr. 6.

F. Common shares

<i>Paid In</i>	<i>Historical Amount</i>	<i>Factor</i>	<i>Restated Amount (Yr. 5)</i>
Yr. 1 150,000 shares	\$ 150,000	1.44	\$ 216,000

28/Accounting for Changes in the  
General Purchasing Power of Money

GPL Company Ltd.  
Balance Sheet as at December 31, Yr. 5

	Historical	Note	Restated at December 31, Yr. 5
	\$ (000)		\$ (Yr.5) (000)
<u>Assets</u>			
Current assets			
Cash	\$ 200		\$ 200
Accounts receivable	400		400
Inventories - at cost (FIFO)	<u>610</u>	A	<u>622</u>
	<u>\$1,210</u>		<u>\$1,222</u>
Fixed assets - at cost	\$ 800 )		\$1,015
Less: accumulated depreciation	<u>264 )</u>	B	<u>342</u>
	<u>\$ 536</u>		<u>\$ 673</u>
Investments - at cost	<u>\$ 110</u>	C	<u>\$ 138</u>
	<u><u>\$1,856</u></u>		<u><u>\$2,033</u></u>
<u>Liabilities and Shareholders' Equity</u>			
Current liabilities			
Accounts payable	\$ 331		\$ 331
Long-term debt (repayable in foreign currency)	<u>200</u>	D	<u>260</u>
Total liabilities	<u>\$ 531</u>		<u>\$ 591</u>
Deferred income taxes	<u>\$ 200</u>		<u>\$ 200</u>
Shareholders' equity			
Preferred shares	\$ 100	E	\$ 110
Common shares	150	F	216
Retained earnings	<u>875</u>	(difference)	<u>916</u>
Total shareholders' equity	<u>\$1,125</u>		<u>\$1,242</u>
	<u><u>\$1,856</u></u>		<u><u>\$2,033</u></u>



Restatement of non-monetary items at December 31, Yr.6 (items G to T)G. Inventories

The rate of turnover is unchanged in Yr.6. The last two quarter indices are, therefore, averaged as follows:

$$\frac{400.4 + 420.6}{2} = 410.5$$

Therefore, the restatement factor applicable to inventories at December 31, Yr.6 is  $\frac{420.6}{410.5} = 1.02$

Restated balance, therefore, is  $\$500,000 \times 1.02 = \$510,000$

H. Fixed assetsAsset value

Restatement of balance at December 31, Yr.6

Restated balance at December 31, Yr.5 (\$1,015,000 x 1.18)	\$ 1,198,000
Less sale of asset acquired in Yr.3 (\$40,000 x 1.25) x 1.18	<u>59,000</u>
	\$ 1,139,000
Addition during second quarter of Yr.6 - (\$100,000 x 1.14)	<u>114,000</u>
	\$ <u>1,253,000</u>

Accumulated depreciation

Restatement of balance at December 31, Yr.6

Restated balance at December 31, Yr.5 (\$342,000 x 1.18)	\$ 404,000
Less sale (\$12,000 x 1.25) x 1.18	<u>18,000</u>
	\$ 386,000
Depreciation (10% of \$1,253,000)	<u>125,000</u>
	\$ <u>511,000</u>

Note that \$12,000 for accumulated depreciation relating to the asset sold was arrived at as follows:

$$3 \times 10\% \times \$40,000 \text{ (original cost)} = \$12,000$$

representing 3 years accumulated depreciation at 10% per year.

I. Investments

Restatement of balance at December 31, Yr. 6

$$\$138,000 \text{ (restated balance Yr.5)} \times 1.18 = \$163,000$$

### 30/Accounting for Changes in the General Purchasing Power of Money

#### J. Long-term debt in foreign currency

Restatement of balance at December 31, Yr. 6

$$\$260,000 \text{ (restated balance Yr.5)} \times 1.18 = \$307,000$$

The current exchange rate at the end of Yr.6 was FC 1 = \$1.55 which would indicate a debt of \$310,000 Canadian. No write-down is, therefore, necessary. (See also item D.)

#### K. Common shares

Restatement of balance at December 31, Yr.6

$$\$216,000 \text{ (restated balance Yr.5)} \times 1.18 = \$255,000$$

#### L. Sales

Sales are assumed to have been spread evenly throughout the year (i.e. there is no seasonality - in the presence of seasonality a weighted average index would have had to have been used.

$$\$3,012,000 \times 1.08 = \$3,253,000$$

#### M. Cost of sales

Historical balances

Inventory at December 31, Yr.5	\$ 610,000
Inventory at December 31, Yr.6	<u>500,000</u>
	\$ 110,000
Purchases	<u>1,655,000</u>
	<u>\$ 1,765,000</u>

Restatement at December 31, Yr.6

Inventories at December 31, Yr.5 restated are \$622,000 x 1.18 (updated of Yr.5 figure)	\$ 734,000
Purchases \$1,655,000 x 1.08	<u>1,787,000</u>
	\$ 2,521,000
Less inventory at December 31, Yr.6 restated	<u>510,000</u>
	<u>\$ 2,011,000</u>

Note: Purchases are assumed to accrue evenly throughout the year. The reasonableness of this assumption would have to be reviewed in each case.

#### N. Selling and administrative expenses

These expenses were spread evenly throughout the year.

$$\text{Restated balance} = \$748,000 \times 1.08 = \$808,000$$

O. Interest

All paid in June of each year.

$$\text{Restated balance} = \$30,000 \times 1.14 = \$34,000$$

P. Profit on sale of fixed assets

Sale made in 2nd quarter, Yr.6

	<i>Restated December 31, Yr.6</i>
Selling price $\$40,000 \times 1.14$	\$ <u>46,000</u>
Restated cost of asset (see analysis in H)	\$ 59,000
Less restated depreciation (see analysis in H)	( <u>18,000</u> )
	\$ <u>41,000</u>
Restated profit	\$ <u><u>5,000</u></u>

Q. Income taxes

Spread evenly throughout the year.

Current

$$\text{Restated balance} = \$164,000 \times 1.08 = \$177,000$$

Deferred

$$\text{Restated balance} = \$20,000 \times 1.08 = \$22,000$$

R. Retained earnings

Restatement of adjusted balance at December 31, Yr.5 to Yr.6 price-level

$$\$916,000 \times 1.18 = \$1,080,000$$

S. Dividends paid

Dividends paid quarterly in equal amounts (preferred and common) average index =

$$\frac{362.7 + 369.8 + 400.4 + 420.6}{4} = 388.4$$

$$\text{Therefore, factor of translation} = \frac{420.6}{388.4} = 1.08$$

$$\text{Restated balance} = \$60,000 \times 1.08 = \$65,000$$

[ N.B. Included in dividends paid were preferred dividends of \$10,000.  
The restated balance of the preferred dividends is therefore,

$$\frac{\$10,000}{\$60,000} \times \$65,000 = \$11,000 ]$$

32/Accounting for Changes in the  
General Purchasing Power of Money

T. Calculation of general price-level loss

In order to compute the general price-level gain or loss, the following schedule of changes in net monetary items is prepared:

	December 31, Yr.5		December 31, Yr.6
	Historical	Updated to Yr. 6	Historical
Cash	\$ 200,000	\$ 236,000	\$ 341,000
Accounts receivable	400,000	472,000	438,000
Accounts payable	(331,000)	(391,000)	(215,000)
Deferred income taxes	(200,000)	(236,000)	(220,000)
	<u>\$ 69,000</u>	<u>\$ 81,000</u>	<u>\$ 344,000</u>
	Historical	Note	Restated to December 31, Yr.6
Net monetary items		as	
December 31, Yr.5	\$ 69,000	above	\$ 81,000
Add:			
Sales	3,012,000	L	3,253,000
Proceeds from sale of fixed assets	40,000	P	46,000
	<u>\$3,121,000</u>		<u>\$3,380,000</u>
Less:			
Purchases	\$1,655,000	M	\$1,787,000
Selling and administrative expenses	748,000	N	808,000
Interest paid	30,000	O	34,000
Income taxes - current	164,000 )	Q	177,000
- deferred	20,000 )		22,000
Purchase of fixed assets	100,000	H	114,000
Dividends paid	60,000	S	65,000
	<u>\$2,777,000</u>		<u>\$3,007,000</u>
Net monetary items restated at December 31, Yr.6			\$ 373,000
Actual net monetary items at December 31, Yr.6			<u>344,000</u>
General price-level loss (charged to income)			<u>\$ 29,000</u>
<u>General price-level gain on preferred shares</u>			
Balance at the beginning of Yr.6			<u>\$ 110,000</u>
Restated at the end of Yr.6 = \$110,000 x 1.18			\$ 130,000
Balance at the end of the year			<u>110,000</u>
General price-level gain on preferred shares			<u>\$ 20,000</u>

This amount is a capital item and is credited to retained earnings.



GPL Company Ltd.  
Balance Sheet as at December 31, Yr. 6

		Yr. 6	Yr. 5
	Historical	Note	Restated at
	\$ (000)		Dec. 31, Yr. 6
			\$ (Yr. 6) (000)
			Updated to
			Dec. 31, Yr. 6
			\$ (Yr. 6) (000)
<u>Assets</u>			
Current assets			
Cash	\$ 341		\$ 341
Accounts receivables	438		438
Inventories - at cost (FIFO)	<u>500</u>	G	<u>510</u>
Total current assets	<u>\$1,279</u>		<u>\$1,289</u>
Fixed assets - at cost	\$ 860)		\$1,253
Less: accumulated depreciation	<u>338)</u>	H	<u>511</u>
	<u>\$ 522</u>		<u>\$ 742</u>
Investments - at cost	\$ <u>110</u>	I	\$ <u>163</u>
	<u>\$1,911</u>		<u>\$2,194</u>
<u>Liabilities and Shareholders' Equity</u>			
Current liabilities			
Accounts payable	\$ 215		\$ 215
Long-term debt (in foreign currency)	<u>200</u>	J	<u>307</u>
Total liabilities	<u>\$ 415</u>		<u>\$ 522</u>
Deferred income taxes	\$ <u>220</u>		\$ <u>220</u>
Shareholders' equity			
Preferred shares	\$ 100	T	\$ 110
Common shares	150	K	255
Retained earnings	<u>1,026</u>		<u>1,087</u>
Total shareholders' equity	<u>\$1,276</u>		<u>\$1,465</u>
	<u>\$1,911</u>		<u>\$2,194</u>

34/Accounting for Changes in the  
General Purchasing Power of Money

*GPL Company Ltd.*  
*Statement of Income and Retained Earnings*  
*for the year ended December 31, Yr. 6*

	<i>Historical</i> \$ (000)	<i>Note</i>	<i>Restated at</i> <i>Dec.31, Yr.6</i> \$(Yr.6) (000)
Sales (net)	\$3,012	L	\$ 3,253
Cost of sales	<u>1,765</u>	M	<u>2,011</u>
Gross profit	<u>\$1,247</u>		<u>\$1,242</u>
Operating expenses			
Depreciation	\$ 86	H	\$ 125
Selling and administrative	748	N	808
Interest	<u>30</u>	O	<u>34</u>
	<u>\$ 864</u>		<u>\$ 967</u>
Operating profit	\$ 383		\$ 275
Profit on sale of fixed assets	<u>12</u>	P	<u>5</u>
	\$ 395		\$ 280
General price-level loss	<u>-</u>	T	<u>(29)</u>
Income before income taxes	\$ 395		\$ 251
Income taxes	<u>184</u>	Q	<u>199</u>
Net income for the year	\$ 211		\$ 52
Retained earnings at January 1, Yr.6	<u>875</u>	R	<u>1,080</u>
	\$1,086		\$1,132
Less: dividends paid	<u>60</u>	S	<u>65</u>
	\$1,026		\$1,067
Add: general price-level gain on preferred shares	<u>-</u>		<u>20</u>
Retained earnings at December 31, Yr.6	<u><u>\$1,026</u></u>		<u><u>\$1,087</u></u>

Calculation of earnings per shareHistorical cost basis

Yr. 5

Net income for the year	\$ 279,000
Less: Dividends to preferred shareholders	<u>(10,000)</u>
	<u>\$ 269,000</u>

150,000 common shares were outstanding during the year,  
therefore, earnings per share is  $\frac{269,000}{150,000} = \$1.79$

Yr. 6

Net income for the year	\$ 211,000
Less: Dividends to preferred shareholders	<u>(10,000)</u>
	<u>\$ 201,000</u>

150,000 common shares were outstanding during the year,  
therefore, earnings per share is  $\frac{201,000}{150,000} = \$1.34$

General price-level basis

Yr. 6

Net income for the year (\$Yr. 6)	\$ 52,000
Less: Dividends to preferred shareholders (see item S)	<u>(11,000)</u>
	\$ 41,000
Add: General price-level gain on preferred shares	<u>20,000</u>
	<u>\$ 61,000</u>

Earnings per share, therefore, is  $\frac{61,000}{150,000} = \$Yr. 6 \ 0.41$

\* \* \* \* \*

### 36/Accounting for Changes in the General Purchasing Power of Money

#### PRESENTATION

The following illustrates, using the data previously derived, how the minimum information recommended in this Section might be disclosed. It also indicates how certain desirable information, e.g. comparative figures and reconciliation between net income on a historical cost basis and net income on a general price-level basis might be disclosed. This example is only one method of presentation and should not be taken as a model for all situations.

#### SUPPLEMENTARY GENERAL PRICE-LEVEL INFORMATION

	<i>Historical Cost Basis</i>		<i>General Price-Level Basis</i>	
	\$ (000)		\$(Yr.6) (000)	
	Yr.6	Yr.5	Yr.6	Yr.5
<u>Financial Position at the end of the year</u>				
Inventories	\$ 500	\$ 610	\$ 510	\$ 734
Working capital	1,064	879	1,074	1,051
Fixed assets (net of accumulated depreciation)	522	536	742	794
Total assets	1,911	1,856	2,194	2,399
Total common shareholders' equity	1,176	1,025	1,342	1,335

#### Results for the year

Sales	\$3,012	\$2,624	\$3,253	*
Depreciation	86	80	125	*
General price-level loss charged to income (Note 5)	-	-	(29)	*
Net income for the year	211	279	52	*
Per common share (Note 5)	\$1.34	\$1.79	\$0.41	*

#### Selected ratios

Return on common shareholders' equity	17.9%	27.2%	3.8%	*
Dividends per common share	\$0.33	\$0.33 (\$Yr.6)	0.35	*
Dividend (common and preferred) coverage on earnings	3.5 times	4.7 times	0.8 times	*

\* Since these figures were only calculated for Yr.6 in the Preparation section of this example, it is not possible to show the Yr.5 comparative figures. In practice, however, they would be provided.



Notes to the Supplementary General Price-Level Information

1. The following is a reconciliation of the difference between net income on the historical cost basis and that determined under the general price-level basis.

Yr.6 \*

Net income for the year	\$ 211,000
-------------------------	------------

Inventory

Additional charges based on restating the cost of inventory at the beginning and the end of the year in terms of dollars of current general purchasing power. This removed the effect of general inflation out of the profit on sale of inventory	\$ (114,000)
---	--------------

Depreciation

Additional depreciation based on cost, measured in terms of dollars of current purchasing power, of fixed assets.	(39,000)
---	----------

General price-level loss

This reflects the net loss in purchasing power arising from holding a net monetary asset position in a period of inflation (Note 5).	(29,000)
--	----------

Sales, purchases and other items

These are increased by the changes in the general index between the average date at which they occurred and the end of the year. This adjustment increases profit as sales exceed the costs included in this heading.	23,000	(159,000)
		\$ 52,000

Adjustment required to update last year's net income from general purchasing power at the end of Yr.5 to current general purchasing power at the end of Yr.6.	-
---	---

Net income current general price-level basis, December 31, Yr.6 \$(Yr.6)	\$ 52,000
--	-----------

\* Since these figures were only calculated for Yr.6 in the Preparation section of this example, it is not possible to show the Yr.5 comparative figures. In practice, however, they would be provided.

38/Accounting for Chagnes in the  
General Purchasing Power of Money

2. The amounts shown in the columns under the general price-level basis were arrived at by translating corresponding figures in the historical cost basis column by reference to changes in the Gross National Expenditure Implicit Price (GNE) Index between the dates of acquisition and December 31, Yr.6. The figures are expressed in terms of units of general purchasing power as at December 31, Yr.6.
3. Since the amounts shown on the general price-level basis only reflect the effect of general inflation on the company they do not purport to represent appraised value, replacement cost, or any other measure of current values at which transactions would take place currently.
4. The Department of National Revenue does not accept the general price-level basis for tax purposes. Therefore, taxes are based on the tax provision in the historical cost financial statements. No adjustments have been reflected based on restated values.
5. The net general price-level loss from holding monetary assets (such as accounts receivable) net of monetary liabilities (such as accounts payable) during a period is included in net income. The general price-level gain attributed to preferred shares has been credited to retained earnings. In accordance with the Recommendations of the Accounting Research Committee of the Canadian Institute of Chartered Accountants this amount has been added to net income in the computation of earnings per common share.

GENERAL PRICE-LEVEL ADJUSTED STATEMENTS  
PREPARED ON BASIS RECOMMENDED BY C.I.C.A.

APPENDIX II - I  
STATEMENT OF FINANCIAL POSITION

	<u>Historical Costs</u>		<u>Units of General Purchasing Power</u>	
	1974	1973	1974	1973
	\$'000	\$'000	\$'000 (74)	\$'000 (74)
<b>ASSETS</b>				
<b>Fixed assets</b>				
Fixed assets in service, at cost	5,780,942	5,499,616	9,937,185	9,615,631
Less accumulated depreciation	<u>1,093,272</u>	<u>958,796</u>	<u>2,155,871</u>	<u>1,942,392</u>
	4,687,670	4,540,820	7,781,314	7,673,239
Fixed assets under construction, at cost	<u>1,665,829</u>	<u>1,081,281</u>	<u>1,678,150</u>	<u>1,260,240</u>
	6,353,499	5,622,101	9,459,464	8,933,479
<b>Current assets</b>				
Cash and short-term investments	77,046	156,234	77,046	178,107
Accounts receivable	129,962	117,994	129,962	134,542
Fuel for electric generation, at cost	158,813	119,778	164,876	141,513
Materials and supplies, at cost	<u>57,285</u>	<u>32,770</u>	<u>57,830</u>	<u>37,671</u>
	423,106	426,776	429,714	491,833
<b>Other assets</b>				
Investments	228,710	230,911	228,710	263,238
Debt discount and expense, less amounts written off	47,680	44,668	47,680	50,922
Investment in coal supply	<u>6,711</u>	<u>-</u>	<u>6,778</u>	<u>-</u>
Long-term accounts receivable and other assets	<u>20,583</u>	<u>18,710</u>	<u>20,825</u>	<u>21,455</u>
	303,684	294,289	303,993	335,615
	7,080,289	6,343,166	10,193,171	9,760,927

	Historical Costs		Units of General Purchasing Power	
	1974	1973	1974	1973
LIABILITIES	\$'000	\$'000	\$'000 (74)	\$'000 (74)
Long-term debt				
Bonds payable				
Plant purchase agreement	4,782,514	4,271,924	4,782,514	4,869,993
	<u>245,900</u>	<u>250,135</u>	<u>245,900</u>	<u>285,154</u>
Less payable within one year	5,028,414	4,522,059	5,028,414	5,155,147
	<u>118,560</u>	<u>112,886</u>	<u>118,560</u>	<u>128,690</u>
Current liabilities	4,909,854	4,409,173	4,909,854	5,026,457
Accounts payable and accrued charges				
Notes payable	225,084	205,842	225,084	234,660
Accrued interest	249,985	178,800	249,985	203,832
Long-term debt payable within one year	104,876	90,619	104,876	103,306
	<u>118,560</u>	<u>112,886</u>	<u>118,560</u>	<u>128,690</u>
Equity	698,505	588,147	698,505	670,488
Equities accumulated through debt retirement appropriations				
Reserve for stabilization of rates and contingencies	1,015,725	942,586	1,739,478	1,663,194
Contributions from the Province of Ontario as assistance for rural construction	329,510	276,565	46,752	(397,794)
Surplus from Restatement	126,695	126,695	276,889	276,889
	<u>-</u>	<u>-</u>	<u>2,521,693</u>	<u>2,521,693</u>
	1,471,930	1,345,846	4,584,812	4,063,982
	<u>7,080,289</u>	<u>6,343,166</u>	<u>10,193,171</u>	<u>9,760,927</u>



## STATEMENT OF OPERATIONS

APPENDIX II - 3

for the Year Ended December 31, 1974  
(with comparative figures for 1973)

	Historical Costs		Units of General Purchasing Power	
	1974	1973	1974	1973
	\$'000	\$'000	\$'000 (74)	\$'000 (74)
Revenues				
Primary power and energy	896,270	793,654	934,810	936,512
Secondary power and energy	<u>101,506</u>	<u>61,801</u>	<u>105,870</u>	<u>72,925</u>
	997,776	855,455	1,040,680	1,009,437
Costs				
Operation, maintenance and administration	288,360	242,232	309,826	292,487
Fuel used for electric generation	154,037	123,534	178,012	155,056
Power purchased	60,699	41,746	63,309	49,260
Nuclear agreement - payback	15,708	17,560	16,383	20,721
Depreciation	129,353	108,873	217,202	189,540
Amortization of frequency standardization	<u>-</u>	<u>28,265</u>	<u>-</u>	<u>51,157</u>
	648,157	562,210	784,732	758,221
Income before interest	349,619	293,245	255,948	251,216
Interest	<u>223,410</u>	<u>192,779</u>	<u>235,155</u>	<u>228,772</u>
Net income from operations	126,209	100,466	20,793	22,444
General price-level gain	<u>-</u>	<u>-</u>	<u>500,037</u>	<u>319,900</u>
Net income	126,209	100,466	520,830	342,344
Amounts appropriated for:				
Debt retirement	73,184	65,688	76,284	77,509
Stabilization of rates and contingencies	<u>53,025</u>	<u>34,778</u>	<u>444,546</u>	<u>264,835</u>
	126,209	100,466	520,830	342,344

GENERAL PRICE-LEVEL ADJUSTED STATEMENTS  
PREPARED ON BASIS OF AMORTIZING THE GENERAL  
PRICE-LEVEL GAIN

APPENDIX III - 1

STATEMENT OF FINANCIAL POSITION

	<u>Historical Costs</u>		<u>Units of General Purchasing Power</u>	
	1974	1973	1974	1973
	\$'000	\$'000	\$'000 (74)	\$'000 (74)
<b>ASSETS</b>				
<b>Fixed assets</b>				
Fixed assets in service, at cost	5,780,942	5,499,616	9,937,185	9,615,631
Less accumulated depreciation	<u>1,093,272</u>	<u>958,796</u>	<u>2,155,871</u>	<u>1,942,392</u>
	4,687,670	4,540,820	7,781,314	7,673,239
Fixed assets under construction, at cost	<u>1,665,829</u>	<u>1,081,281</u>	<u>1,678,150</u>	<u>1,260,240</u>
	6,353,499	5,622,101	9,459,464	8,933,479
<b>Current assets</b>				
Cash and short term investments	77,046	156,234	77,046	178,107
Accounts receivable	129,962	117,994	129,962	134,542
Fuel for electric generation, at cost	158,813	119,778	164,876	141,513
Materials and supplies, at cost	<u>57,285</u>	<u>32,770</u>	<u>57,830</u>	<u>37,671</u>
	423,106	426,776	429,714	491,833
<b>Other assets</b>				
Investments	228,710	230,911	228,710	263,238
Debt discount and expense, less amounts written off	47,680	44,668	47,680	50,922
Investment in coal supply	6,711	-	6,778	-
Long-term accounts receivable and other assets	<u>20,583</u>	<u>18,710</u>	<u>20,825</u>	<u>21,455</u>
	303,684	294,289	303,993	335,615
	7,080,289	6,343,166	10,193,171	9,760,927

AS AT DECEMBER 31, 1974

	Historical Costs		Units of General Purchasing Power	
	1974	1973	1974	1973
	\$'000	\$'000	\$'000 (74)	\$'000 (74)
<b>LIABILITIES</b>				
Long-term debt				
Bonds payable	4,782,514	4,271,924	4,782,514	4,869,993
Plant purchase agreement	245,900	250,135	245,900	285,154
Less payable within one year	5,028,414	4,522,059	5,028,414	5,155,147
	118,560	112,886	118,560	128,690
	4,909,854	4,409,173	4,909,854	5,026,457
<b>Current liabilities</b>				
Accounts payable and accrued charges	225,084	205,842	225,084	234,660
Notes payable	249,985	178,800	249,985	203,832
Accrued interest	104,876	90,619	104,876	103,306
Long-term debt payable within one year	118,560	112,886	118,560	128,690
	698,505	588,147	698,505	670,488
<b>Equity</b>				
Equities accumulated through debt retirement appropriations	1,015,725	942,586	1,739,478	1,663,194
Reserve for stabilization of rates and contingencies	329,510	276,565	(735,546)	(707,031)
Contributions from the Province of Ontario as assistance for rural construction	126,695	126,695	276,889	276,889
Surplus from restatement	-	-	2,521,693	2,521,693
Unamortized general price-level gain	-	-	782,298	309,237
	1,471,930	1,345,846	4,584,812	4,063,982
	7,080,289	6,343,166	10,193,171	9,760,927

## STATEMENT OF OPERATIONS

for the Year Ended December 31, 1974  
(with comparative figures for 1973)

	Historical Costs		Units of General Purchasing Power	
	1974	1973	1974	1973
	\$ '000	\$ '000	\$ '000 (74)	\$ '000 (74)
Revenues				
Primary power and energy	896,270	793,654	934,810	936,512
Secondary power and energy	<u>101,506</u>	<u>61,801</u>	<u>105,870</u>	<u>72,925</u>
	997,776	855,455	1,040,680	1,009,437
Costs				
Operation, maintenance and administration	288,360	242,232	309,826	292,487
Fuel used for electric generation	154,037	123,534	178,012	155,056
Power purchased	60,699	41,746	63,309	49,260
Nuclear agreement - payback	15,708	17,560	16,383	20,721
Depreciation	129,353	108,873	217,202	189,540
Amortization of frequency standardization	<u>-</u>	<u>28,265</u>	<u>-</u>	<u>51,157</u>
	648,157	562,210	784,732	758,221
Income before interest	349,619	293,245	255,948	251,216
Interest	<u>223,410</u>	<u>192,779</u>	<u>235,155</u>	<u>228,772</u>
Net income from operations	126,209	100,466	20,793	22,444
Amortization of general price-level gain	<u>-</u>	<u>-</u>	<u>26,976</u>	<u>10,663</u>
Net income	<u>126,209</u>	<u>100,466</u>	<u>47,769</u>	<u>33,107</u>
Amounts appropriated for:				
Debt retirement	73,184	65,688	76,284	77,509
Stabilization of rates and contingencies	<u>53,025</u>	<u>34,778</u>	<u>(28,515)</u>	<u>(44,402)</u>
	126,209	100,466	47,769	33,107



RESTATEMENT OF FIXED ASSETS

(as at December 31, 1974)

Class	Historical	General Price-Level Restated		Current
	Cost \$'000	G.N.E. Indexed \$'000	Adjusted for Year of Expenditure \$'000	Reproduction Cost \$'000
<u>Fixed Assets in Service</u>				
Hydraulic Generation	1,592,486	3,141,840	3,278,782	3,608,687
Thermal Generation	1,753,363	2,466,373	2,665,948	2,940,540
Transformation	692,776	1,135,546	1,175,459	1,212,420
Transmission & Communication	740,448	1,252,264	1,303,656	1,513,668
Retail Distribution	561,009	942,511	942,511	1,065,048
Administrative, Service and Other	440,860	570,829	570,829	570,829
Total	5,780,942	9,509,363	9,937,185	10,911,192
<u>Fixed Assets Under Construction</u>				
	1,665,829	1,678,150	1,678,150	2,136,358
<u>Accumulated Depreciation</u>				
Hydraulic Generation	256,499	570,330	575,929	635,250
Thermal Generation	276,833	457,932	490,972	541,542
Transformation	154,395	306,400	315,602	325,701
Transmission and Communication	135,341	273,877	284,688	343,049
Retail Distribution	174,963	351,241	351,241	396,902
Administrative, Service and Other	95,241	137,439	137,439	137,439
Total	1,093,272	2,097,219	2,155,871	2,379,883
<u>Depreciation Expense</u>				
Direct	129,353	205,950	217,202	240,311
Indirect	25,818	32,816	32,816	32,816
Total	155,171	238,766	250,018	273,127

DEBT/EQUITY RATIOS

APPENDIX V

	Historical		Units of General Purchasing Power Appendix II		Units of General Purchasing Power Appendix III		Current Value
	1974	1973	1974	1973	1974	1973	
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Debt</b>							
Bonds payable	4,782,514	4,271,924	4,782,514	4,869,993	4,782,514	4,869,993	4,782,514
Plant purchase agreement	245,900	250,135	245,900	285,154	245,900	285,154	245,900
Notes payable	249,985	178,800	249,985	203,832	249,985	203,832	249,985
	5,278,399	4,700,859	5,278,399	5,358,979	5,278,399	5,358,979	5,278,399
<b>Equity</b>							
Debt retirement	1,015,725	942,586	1,739,478	1,663,194	1,739,478	1,663,194	1,015,725
Stabilization of rates	329,510	276,565	46,752	(397,794)	(735,546)	(707,031)	(990,801)
Provincial contribution	126,695	126,695	276,889	276,889	276,889	276,889	126,695
Restatement reserve	1,471,930	1,345,846	2,063,119	1,542,289	1,280,821	1,233,052	151,619
Unamortized gain	-	-	2,521,693	2,521,693	2,521,693	2,521,693	5,708,894
	1,471,930	1,345,846	4,584,812	4,063,982	4,584,812	4,063,982	5,860,513
Debt/Equity Ratio	78.1:21.9	77.7:22.3	53.5:46.5	56.8:43.2	53.5:46.5	56.8:43.2	47.0:53.0
Net Income	126,209	100,66	20,793	22,444	20,793	22,444	(18,449)
Including price-level gain	-	-	674,354	424,499	37,373	20,547	
Average equity	1,408,088	1,299,313	4,483,494	3,934,067	4,800,038	4,719,875	est. 5,800,000
% Return	8.96	7.73	.46	.57	.43	.47	(.32)
Including price-level gain	-	-	15.04	10.79	.77	.43	-

## CURRENT VALUE STATEMENTS

## STATEMENT OF FINANCIAL POSITION AS AT DECEMBER 31, 1974

	Historical		Current			Historical		Current	
	Cost	1974	Cost	1974		Cost	1974	Cost	1974
	\$'000		\$'000			\$'000		\$'000	
ASSETS									
Fixed assets									
Fixed assets in service, at cost	5,780,942		10,911,192		Bonds payable	4,782,514		4,782,514	
Less accumulated depreciation	1,093,272		2,379,883		Plant purchase agreement	245,900		245,900	
	4,687,670		8,531,309			5,028,414		5,028,414	
Fixed assets under construction, at cost	1,565,829		2,136,358		Less payable within one year	118,560		118,560	
	6,353,499		10,667,667			4,909,854		4,909,854	
Current assets									
Cash and short-term investments	77,046		77,046		Current liabilities				
Accounts receivable	129,962		129,962		Accounts payable and accrued charges	225,084		225,084	
Fuel for electric generation, at cost	158,813		233,228		Notes payable	249,985		249,985	
Materials and supplies, at cost	57,285		57,285		Accrued interest	104,876		104,876	
	423,106		497,521		Long-term debt payable within one year	118,560		118,560	
Other assets									
Investments	228,710		228,710		Equity	698,505		698,505	
Debt discount and expense, less amounts written off	47,680		47,680		Equities accumulated through debt retirement appropriations	1,015,725		1,015,725	
Investment in coal supply	6,711		6,711		Reserve for stabilization of rates and contingencies	329,510		329,510	
Long-term accounts receivable and other assets	20,583		20,583		Revaluation surplus	-		(990,801)	
	303,684		303,684		Contributions from the Province of Ontario as assistance for rural construction	126,695		5,708,894	
	7,080,289		11,468,872			1,471,930		5,860,513	
						7,080,289		11,468,872	

## STATEMENT OF OPERATIONS

for the Year Ended December 31, 1974

	Historical Cost <u>1974</u> \$'000	Current Reproduction Cost <u>1974</u> \$'000
<b>Revenues</b>		
Primary power and energy	896,270	896,270
Secondary power and energy	<u>101,506</u>	<u>101,506</u>
	997,776	997,776
<b>Costs</b>		
Operation, maintenance and administration	288,360	288,360
Fuel used for electric generation	154,037	187,737
Power purchased	60,699	60,699
Nuclear agreement - payback	15,708	15,708
Depreciation	<u>129,353</u>	<u>240,311</u>
	648,157	792,815
Income before interest	349,619	204,961
Interest	<u>223,410</u>	<u>223,410</u>
Net income	<u>126,209</u>	<u>(18,449)</u>
Amounts appropriated for:		
Debt retirement	73,184	73,184
Stabilization of rates and contingencies	<u>53,025</u>	<u>(91,633)</u>
	126,209	(18,449)



## RESERVE FOR STABILIZATION OF RATES AND CONTINGENCIES

for the Year Ended December 31, 1974

	Historical Cost <u>1974</u> \$'000	Current Reproduction Cost <u>1974</u> \$'000
Balance at beginning of year	276,565	276,565
Appropriated from net income	53,025	(91,633)
Grant to Ontario Municipal Electric Association	(80)	(80)
Adjustment of prior years' depreciation on current replacement cost of fixed assets in service	<u>-</u>	<u>(1,175,653)</u>
Balance at end of year	<u>329,510</u>	<u>(990,801)</u>

## STATEMENT OF REVALUATION SURPLUS

for the Year Ended December 31, 1974

	Current Reproduction Cost <u>1974</u> \$'000
Revaluation of assets to reflect current replacement costs at December 31, 1974	
Fixed assets in service	5,130,250
Fixed assets under construction	<u>470,529</u>
	5,600,779
Fuel for electric generation	<u>74,415</u>
	5,675,194
Revaluation of cost of fuel used for electric generation for 1974 - the replacement cost of fuel used during 1974 at the date of the consumption of the fuel	<u>33,700</u>
Balance at end of the year	<u>5,708,894</u>







